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PERSPECTIVES OF GENERATIVE AI CHATBOT USAGE AMONG CAREGIVERS OF
YOUNG CHILDREN AGED 3-7 IN SINGAPORE

Master's thesis

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Abstract

Perspectives of Generative AI Chatbot Usage Among Caregivers of Young Children Aged 3-7 in Singapore

This study investigates caregivers' perspectives on GenAI chatbots for learning activities with young children aged 3-7 in Singapore. How caregivers utilize Generative AI chatbots with children, and their views on its impact, are explored. Findings reveal that caregivers actively employ Generative AI chatbots to enhance children's learning. While some caregivers embrace this technology, others remain cautious. Challenges include establishing effective school-home partnerships and ensuring safe use. As Generative AI evolves, educators and caregivers must adapt their practices to harness its potential in both home and school settings.

Keywords: perspectives, Generative AI, chatbots, caregivers, parents, young children, learning, technology, school-home partnerships, safety, Singapore

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1 Introduction

Chatbots play crucial roles in making learning interactive and engaging (Khosravi et al., 2022; Jiang, 2022). With Generative Artificial Intelligence (GenAI), these chatbots have evolved to provide responses that are not only relevant, but also customised to individual needs. In Singapore, educators initially had reservations regarding GenAI chatbots in learning, particularly concerning academic integrity (Abdullah, 2023). They have since recognised the value of these tools and are promoting the ethical use of GenAI chatbots for learning (Ministry of Education, 2024).

While there is a lot of buzz about GenAI chatbot usage for older learners, we are just starting to explore how they can bridge the gap between schools and the younger learners at home. We turn towards the home, because when families get involved in learning, learners perform better and feel more confident (Hoover-Dempsey et al., 2005). This study goes into the perspectives of family caregivers regarding the use of GenAI chatbots in their children's learning, with the goal of making these tools an even better fit for young learners' learning needs.

2 Theoretical Framework

2.1 History and development of GenAI chatbots

Chatbots, typically powered by Artificial Intelligence (AI), are adept at simulating human-like conversations. They use Natural Language Processing to understand and respond to human queries (Khanna et al., 2015). These tools have established their niches in various domains, including customer relations, online retail, healthcare, and others.

The public's introduction to GenAI tools like Stable Diffusion, DALL-E and ChatGPT has sparked an appreciation of AI's potential. GenAI stands out for its ability to create original content, as seen with ChatGPT, which uses sophisticated language processing for complex interactions (Limna et al., 2023). This represents a shift from "traditional" AI, which primarily processes and analyses data.

2.2 GenAI Chatbots in learning

The recent work of Crompton & Burke (2024) highlights the affordances of GenAI in educational settings: offering educators instructional support, automating tasks, and providing learners with personalised learning experiences. While existing studies have explored the use of GenAI chatbots for adolescents (Krullaars et al., 2023; Assayed et al., 2023), studies to understand their impact on

early childhood education are sparse, despite displaying some promise to nurture developmental skills (Han & Cai, 2023; Sun et al., 2024).

Singapore has been proactive in AI education even before the ongoing GenAI surge, with organizations like AI Singapore promoting AI literacy among young learners (AI Singapore, n.d.). The current discourse in Singapore emphasizes the ethical and effective integration of GenAI chatbots by educators (Ministry of Education, 2024).

Responses among educators about GenAI chatbots are diverse. A recent study found that most educators are open to integrating GenAI into their pedagogy (Kaplan-Rakowski et al., 2023). Regular use of GenAI chatbots tends to create a more positive outlook, having an impact on teaching methods, content and assessment (Bower et al., 2023). However, educators express several concerns. These include worries about the resources needed, the accuracy of GenAI chatbot responses, the potential impact on academic integrity, erosion of critical thinking, and issues related to privacy and personal interaction (Limna et al., 2023; Kishore et al., 2023; Grassini, 2023). On the other hand, research on specifically early childhood educators' views on GenAI chatbots is limited. Available studies suggest a generally positive outlook, with reservations about young learners' digital literacy competencies (Allehyani & Algamdi, 2023; Su et al., 2023).

Limna (2023) also found that older learners perceive the use of GenAI chatbots as engaging and supporting them, but they echo educators' concerns regarding the accuracy and integrity of these tools.

2.3 Caregivers and GenAI chatbots at home

For this study, a "caregiver" is defined as a person who takes care of a child at home. Although all participating caregivers are also parents, being a parent was not a requirement for inclusion.

2.3.1 School-home partnerships

Kent (2022) describes caregivers partnering with schools to enhance the learning process. School-home partnerships, in which schools and families connect and collaborate, are crucial in shaping learners' learning experiences. They improve school attendance (Hill & Reimer, 2022), and cultivate a reciprocal relationship built on confidence and respect (Graham et al., 2019).

In school-home partnerships, caregivers play a significant role by collaborating with educators, ensuring a shared partnership of the learner's learning experience (Swick, 1992, as cited in Bevans et al., 2001). Schools must acknowledge and incorporate the perspectives of caregivers

in such partnerships. Not only does this enrich the learning environment, but it also promotes a more engaged partnership (Davies, 1993). Furthermore, when caregivers and educators exchange information about learners and genuinely consider each other's insights, they share the creation of knowledge that benefits the learning process for the learner (Lynch, 2021). This exchange is particularly pertinent when considering the integration of GenAI chatbots in learning. Therefore, seeking and heeding caregiver input concerning the use of GenAI chatbots for learning is critical.

Singapore's Ministry of Education (MOE) advocates a joint effort between schools and caregivers to support the child's development (Ministry of Education, 2019). Considering the affordances of GenAI in learning as outlined by Crompton & Burke (2024), and aligning with the MOE's emphasis on caregiver involvement in home routines, homework support, and communication with educators (Ministry of Education, 2019), it becomes evident that caregivers should actively engage in joint learning activities with their children using GenAI chatbots. Moreover, research suggests that while granting young children access to technology contributes to their achievement, active mediation by adults is needed to maximize its potential (Espinosa et al., 2006). This approach reinforces the school-home partnership and creates an environment conducive to self-regulated learning and responsibility.

2.3.2 Current literature on caregiver perspectives on the use of GenAI chatbots in young children's learning

When it comes to children's use of technology for learning, caregiver involvement goes beyond simply buying devices. Smahelova's (2017) findings are particularly relevant here; they show that the way caregivers perceive and interact with technology significantly shapes their children's attitudes about and practices with technology, even when the children are as young as 3 or 4 years old. Therefore, exploring caregivers' perspectives on technologies for learning, including GenAI chatbots, is vital to understanding their potential role in supporting learning.

Research in this area is little, but existing studies offer some insights. Sun et al. (2024) highlights caregivers' concerns about young children's use of AI and GenAI chatbots for storytelling and reading. These concerns are about the chatbots' language style and the children's cognitive development. For caregivers of older, secondary school learners, Li et al. (2023) found that they have positive views of GenAI chatbots, appreciating their role in supporting learning and skill development. These differing perspectives underscore the importance of tailoring GenAI

chatbots to the developmental stages of learners. Additionally, they suggest that joint caregiver-child interactions with these tools could be beneficial.

2.4 GenAI Chatbot features for young learners

Research has emphasized the importance of dialogue between caregivers and children for learning (De Rosnay & Hughes, 2006, as cited in De Rosnay et al., 2014). Drawing inspiration from the use of smart speakers (Beneteau et al., 2020), incorporating audio capabilities in GenAI chatbots could significantly enrich these interactions. Such features cater to young learners' natural communication styles and can make learning experiences more engaging. Additionally, implementing "ringfencing" ensures that GenAI chatbots operate within parameters that caregivers deem acceptable. This gives them peace of mind, assuring caregivers about the learning content that children safely access.

2.5 Research Questions

This study aims to explore and describe the perspectives of caregivers of young children aged 3-7 in Singapore, regarding GenAI chatbots in learning. I will address the following research questions (RQ):

RQ1: How do caregivers in Singapore use GenAI chatbots in joint learning activities alongside their young children aged 3-7?

RQ2: What are caregivers' perspectives on the use of GenAI chatbots for young children's learning in Singapore?

This research enriches the existing body of knowledge on the use of GenAI chatbots in learning by addressing the following key aspects:

Challenges Identification: By examining the use of GenAI chatbots by caregivers in joint learning activities alongside young children, this study sheds light on challenges and opportunities faced by caregivers in supporting their children's learning. Understanding these challenges is essential for designing effective school-home partnership strategies.

Caregiver Perspectives: Caregivers play a crucial role in supporting children's learning, and by understanding their insights, we get valuable guidance for implementing GenAI chatbots in educational settings.

Future Investigation Areas: This study identifies potential areas for further research and development. These insights will inform future efforts to enhance GenAI chatbots for learning purposes, ensuring their effectiveness and alignment with learner needs.

3 Method

3.1 Choice of GenAI Chatbot - EdnoAI

The reasons behind the choice of EdnoAI (<https://ednovation.com/ednoai>) as the GenAI chatbot used for this study are:

- Appropriateness of lexicon, tone and volume of output for young learners
- Simple use with no account setup required
- Audio input only
- Simultaneous audio and text output

The features of EdnoAI are elaborated on in Appendix A.

3.2 Participants and recruitment

To get data, I used a convenience sampling technique, so that I could get more easily, participants who fulfilled the following criteria: (1) above 18 years old; (2) residing in Singapore; and (3) had in their care, at least one child aged between 3 and 7. This was done via word of mouth. I then disclosed the intent of the study and recruited them if they affirmed that they meet the criteria. I did not specify what GenAI chatbots would be used, or what GenAI chatbots the participants should have used before. 6 potential participants were approached, and all agreed to participate. Upon collection of contact information, 1 of these participants disclosed that their child was 11; this participant was then excluded from here on out, reducing the number to 5. To avoid bias from a closed circle of acquaintances, I requested word-of-mouth transmissions from these 5 participants. 4 additional participants were recruited this way, making 9 participants recruited for Phases 1 and 2 of the study. Out of these 9 participants, 4 also agreed, having been asked after Phase 1 and Phase 2 ended, to take part in Phase 3 of the study. Demographic details of the participants are found in Appendix B.

To obtain their informed consent and employ ethical research practices, participants were informed of the study's intent and procedure at the point of recruitment, and this was reiterated again in 3 runs of the same Phase 1 online workshop conducted on 2 March, 6 March and 17 March

2024. Participants who completed the online workshop and submitted their GenAI chatbot interactions log were given an honorarium in the form of a 20-Singapore Dollar book voucher.

3.3 Data collection and procedure

Figure 1 outlines the sequence of research procedures followed by the recruited participants.

In Phase 1, I conducted an online workshop where the 9 caregiver participants were informed about the research purpose and procedures; the workshop materials are in Appendix C. Topics covered included data privacy, informed consent, how to use EdnoAI, and participants also learned how to record GenAI chatbot interaction logs by taking “screenshots”. This workshop lasted for 30 minutes and was conducted in 3 runs depending on the participants’ schedules and availability: on 2 March, 6 March and 17 March 2024. A Question & Answer session at the end of each workshop yielded questions such as frequency of use of the GenAI chatbot. To maintain consistency, I requested at least 3 interactions with EdnoAI over the course of 2 weeks, and this was mentioned at each of the 3 workshops. I described an “interaction” as an episode of dialogue or communication with the chatbot, with a discernible break before the next one. An example of what constitutes an “interaction” is outlined in Figure 2.

Following this, for Phase 2, caregivers used EdnoAI alongside their children without constraints for 2 weeks, and they collected interaction logs in the form of screenshots, which they deposited into a unique and private online folder. After these 2 weeks of use, 4 caregivers agreed to participate in individual semi-structured interviews in Phase 3. They shared their experiences and perceptions of using GenAI chatbots in their children’s learning. The interviews, which were over Zoom videocall and in English, lasted between 14 and 23 minutes each. The interviews were recorded with consent and automatically transcribed by Zoom, with transcripts edited for only spelling and punctuation. Edited transcripts are in Appendix D.

Figure 1. Outline of research procedure

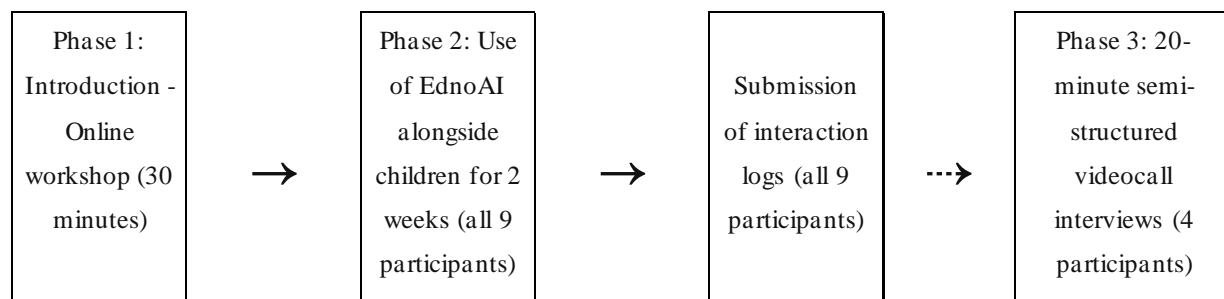
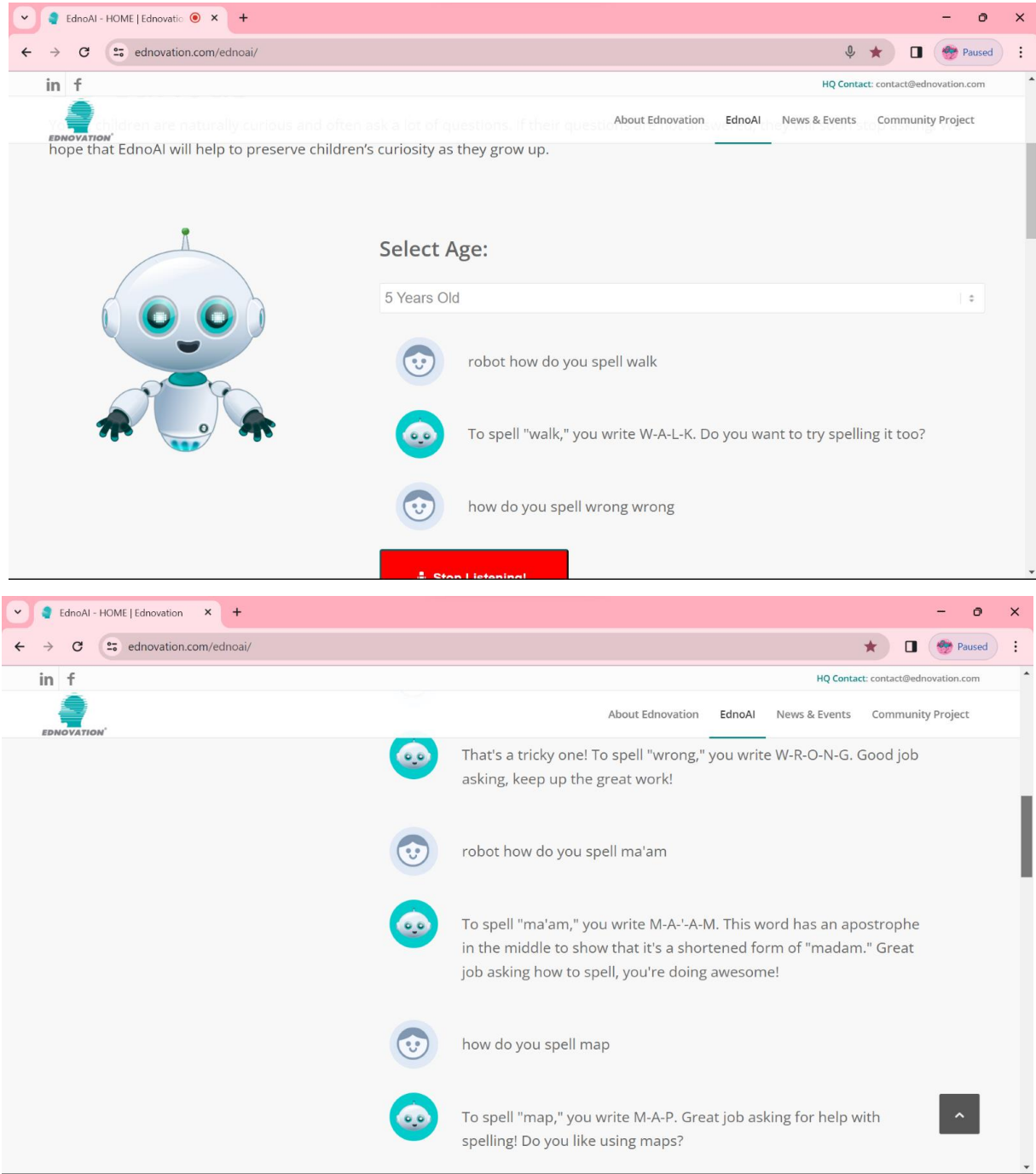


Figure 2. Example of an interaction



3.4 Data analysis

I used a qualitative exploratory method (Creswell, 2008) to understand the usage patterns of a GenAI chatbot by caregivers of young children, and the perspectives of caregivers regarding the use of GenAI chatbots in their children's learning. Creswell (2008) described qualitative research as suitable for fields which are lacking previous research - this research method therefore lends well to such a study, due to the relative recency of previous research, as well as the relative lack of research specific to the convergence of domains that are being studied here.

3.4.1 GenAI Chatbot interaction logs

Interaction logs, recorded by taking "screenshots", provide a verbatim, detailed record of participant activity with the chatbot. The period of 2 weeks of EdnoAI use yielded 59 interactions from the 9 participants. Appendix E contains the submitted interactions.

3.4.2 Semi-structured interviews

Inspired by Beneteau et al. (2019)'s study on the use of smart speakers at home, I set out to observe, question and explore the experiences that the caregivers had with the EdnoAI chatbot, via semi-structured interviews which allowed these caregivers to reflect on their experience. I explored interviews at the semantic level, acknowledging ideas that participants explicitly expressed. At the same time, I also considered the potential for deeper, underlying concepts that might not be immediately apparent.

Before the interview started, participants were informed that they could refer to their own submitted interaction logs to remind themselves of the interactions with EdnoAI. Considering this study's exploratory objective, initial questions as outlined in Appendix F, aimed to uncover caregivers' overall views and encounters with EdnoAI. Following these, the subsequent questions went into the caregivers' perspectives of the use of GenAI chatbots in their children's learning.

With consent, these interviews were recorded to facilitate further analysis. To maintain participant privacy, all data has been anonymised. The reporting approach incorporates quotes from participants to maintain fidelity to the original data. This method aims to portray participant responses in a reliable and impartial manner.

3.4.3 Conduct of thematic analysis

Both sets of data underwent thematic analysis as described by Braun & Clarke (2006). This approach was chosen for its flexibility and ability to provide detailed insights. Based on Caulfield's (2023) description of this thematic analysis process, I first immersed myself in the interaction logs and transcribed interview data by reading it. Next, I created an initial list of codes (Step 2), sub-themes and themes (Step 3). Next, through iterative reading and analysis, the themes were further refined (Step 4). Finally, defining and naming themes (Step 5) and analysing the data using the themes (Step 6) wrap these steps up. The codes for the interaction logs are in Appendix E, and the codes for the interview statements are in Appendix G. The full list of codes, sub-themes and themes are listed in Appendix H.

3.5 Ethical considerations

At the point of contacting prospective participants to participate in the study, they were given detailed information about the study's intent and procedures, and written consent to participate was obtained at the point of submitting their contact details to register for the study. Participants were assured that their involvement was voluntary and anonymous, and that their personal data and data collected during the study would be treated with utmost confidentiality. This was reiterated during the online workshop.

4 Results

4.1 Codes, sub-themes and themes

In order to address the Research Questions, I identified 114 unique codes from the interaction logs and interview transcripts. Subsequent conceptualising and iteration produced 18 sub-themes and 5 distinct themes, all of which are listed in detail in Appendix H.

For the five key themes identified: Theme 1 emphasizes growth and opportunity as GenAI facilitates learning; Theme 2 highlights the potential collective effort and shared vision among stakeholders; Theme 3 considers both the capabilities and limitations of GenAI chatbots in learning; Theme 4 addresses uncertainties arising from the use of GenAI chatbots. Finally, Theme 5 highlights caregiver advocacy for GenAI chatbots in learning.

4.2 Theme 1: GenAI chatbots integration in learning

Integrating GenAI chatbots into learning is transforming the educational experience for children. Central to this transformation is the dynamic interaction between children and GenAI tools, where digital companionship extends beyond mere utility to a more personal connection. Caregiver P4 felt that:

...he (i.e. the child) was always looking forward to...he will get very excited...

marking the experience of the children and caregivers with GenAI chatbots with a sense of wonder and enjoyment.

Caregivers frequently used GenAI chatbots alongside their children to explore ideas, objects, and phenomena. Beyond mere repositories of knowledge, children perceived the GenAI tools as human-like catalysts for learning, greeting EdnoAI with:

Robot robot... (P2A)

That's all for today I love you and I miss you... (P4C)

Moreover, the use of GenAI chatbots extends to creative purposes, allowing one of the children to use EdnoAI as a muse for storytelling and imagination alongside their caregivers:

Can you can you tell me a Star Wars story (P1F)

Can can you tell me a wonderful story about Snow White (P1J)

One caregiver, P5, considered exploring GenAI as a tool for emotional development. She believed that it could develop self-regulated behaviour and help their children express their opinions. She drew reference from:

...this person who uses Generative AI to hone her child's self-directed motivation.

and envisions that she and her child:

...can work towards self-management and improve self-management.

Caregivers perceive that GenAI's integration into learning can extend beyond classroom walls, with its value on both academic and non-academic learning contexts being recognised. Empowering educators, GenAI chatbots:

...allows them (i.e. educators) to focus on teaching and to reduce admin work, and they can have better work-life balance, I'm very, very supportive of it... (P2)

This is the essence of Theme 1 - a story of growth, opportunity and the interweaving of technology with the art of learning.

4.3 Theme 2: Stakeholder perspectives and roles

In this theme, caregivers, educators and schools converge to shape the educational landscape with GenAI. Educators are recognised for their autonomy and expertise, particularly in their ability to integrate GenAI tools into teaching. The flexibility to do so is crucial as it allows educators to design innovative learning experiences.

Caregivers emerge as pivotal figures in shaping their children's learning. They empower young learners, creating an environment where children are encouraged to explore and engage with learning through GenAI chatbots. As caregiver P2 explained to their child:

...You can ask this tool or this phone anything...So I just informed her you can ask any question...

This preference for interactions which resonate with the children's curiosity reflects empowerment. Yet, caregivers strike a balance by providing direct guidance, occasionally directing their children's learning experiences, albeit sometimes at the expense of their autonomy. Some caregivers also experience tension regarding technology adoption. Caregiver P5 expressed the belief that:

...we should try and reduce the use of technology.

As caregivers allocate resources for their children's learning, investment takes on tangible and intangible forms: financial, emotional and intellectual. They strive for the best outcomes for their children, seeking an increase in teaching quality. P2 explains that with GenAI, educators are:

...able to up their ante to increase their skills and competency level to the extent that the materials of teaching and even the mode of teaching right goes up... parents will expect more, right? That is a given, that you are able to produce this kind of content.

Caregivers' investments go beyond mere returns. They observe and monitor their child's progress, and nurture curiosity. Balancing their expectations with humility, caregiver P5 acknowledges that:

...I can't really monitor what goes on the classroom... I just control what's within my realm of info.

The same caregiver acknowledges the demands of contemporary learning and muses about the challenges that their child will encounter in future:

...now the children are expected to generate and infer... So with Generative AI... the natural development is that it requires gen...like at a higher, the highest level is originality and creativity.

Caregivers express an intent to collaborate with schools as a community, by using learning data to make informed decisions and improve communication, to:

...help me as a parent to focus my energy on, you know, remediating gaps...

as suggested by caregiver P5 again.

There remains an underlying concern – some caregivers are uncertain whether schools actively involve them in decisions related to GenAI, or intend to:

...I don't really know whether teachers or principals are required to ask for permission, or even to notify parents. (P4)

...parents are not officially involved, or informed, sorry. (P2)

The narrative that emerges from this ongoing process is that the roles among caregivers, educators and schools can enhance and support each other. This is the essence of Theme 2 – a story of collective effort and shared vision.

4.4 Theme 3: GenAI chatbots performance

In the evolving landscape of artificial intelligence, GenAI faces scrutiny. During the interactions with EdnoAI alongside their child, a caregiver perceived it as still finding its footing, noting that:

There was some very noticeable pauses, of course, because it's still early...(P8)

These concerns extend beyond GenAI's current standing. Caregivers also question its appropriateness for younger age groups. Some fear that the responses provided by GenAI chatbots may not sufficiently tailored to the local context, or may overwhelm young learners with their volume, as shared by caregiver P2:

...quite lengthy la, huh? So typically in a conversational style, right? We will have a question asked by a kid, and then a few sentences, or one or 2 or more sentence, right, to engage the child. So here it's like a typical Gen AI, you know. You ask a question, then, there is a reasonable amount of details, right? But in my view, if this was meant to be a child-appropriate kind of engagement, it could be tweaked lah so that the first answer may not be too long.

Despite these apprehensions, there is an acknowledgement of the ease of use that GenAI offers. However, the safety of children while using GenAI chatbots for children remains a

paramount concern, though caregiver P8 believes that systems are in place to ensure a secure environment for young users to explore and learn:

...my assumption is that there is an in-built algorithm or something that prevents certain things from coming out like, if you want to say something naughty, it's not gonna, it's not going to respond.

In summary, Theme 3 explores the capabilities, limitations and nuanced perceptions that shape the role of GenAI chatbots in learning.

4.5 Theme 4: Uncertainties in ethics, quality and practicalities

Caregivers find themselves in a complex web of considerations when it comes to the use of GenAI chatbots in their children's learning. A prevailing concern centers around the risk of over-reliance on GenAI. Caregiver P4 aptly expresses this worry:

...will it become a, like a crutch, like a handicap, a crutch, or a handicap. Like they will, you know, instead of like finding answers on their own like, say, for example, 100% that they can use it to do their homework instead of like thinking out all the methods.

Equally pressing is the question of schools' readiness for GenAI integration. Schools' preparedness varies widely, with some schools still grappling with the basics. Caregiver P4 shares that for her child's school:

...they only just started like having the app to update like the parents with, like all the updates and all that. And they're still like figuring it out, so I think there's ... I don't know whether they will do AI anytime soon.

Complicating matters further is the conflation of AI with GenAI by caregivers. P5 relates their child's experience with EdnoAI by comparing it with their prior interactions with Siri and Alexa. P5 also describes teachers' experiences with AI tools for automated marking, when asked about their concerns about teachers being allowed to use GenAI in school.

In essence, Theme 4 navigates the delicate balance between innovation and tradition.

4.6 Theme 5: Advocacy and understanding of GenAI

The discourse surrounding GenAI has its champions. Caregivers recognise its usefulness and advocate for personalised applications in learning environments. Caregiver P2 is one such advocate, emphasizing the potential improvement in the quality of resources:

...I'm very, very supportive of it lah. So there are few angles, right? One is the angle of quality of content, right? That one, if through Gen AI, the quality of teaching materials and content can be much, much improved, by all means!

The call for a customised GenAI tool in Singapore schools reflects caregivers' desire for localised and personalised approaches.

Despite occasional reservations, caregivers like P5 compromise when:

...pressed for time. For example, I mean, there's a lot of work to do, and I need to get them the answer very efficiently, or perhaps some of it is not. Sometimes, you know, there are other concerns, say, for example, they're badgering me with...Why is this? Why is the sky blue and all that, and I'm not particularly like sort of...invested, you know, at that moment to go through the the cognitive process with them, I might say, Okay, why don't you ask Siri? And you know, find your own answers? So I think it depends really on the agenda and the, the task at hand.

Caregivers' own willingness to engage with GenAI chatbots goes beyond mere acceptance.

Caregiver P8 expresses interest in its usefulness for themselves:

...if they're using it in a way that could be useful to me. Yes, I would like to know more... But if they were going to use it with our kids. Then I want to know more.

Thus, Theme 5 highlights the optimism of caregivers in envisioning GenAI as an essential learning tool in time to come:

Honestly, I would continue using it... so I feel like it's a good resource for him like in the future...(P4)

5 Discussion

The aim of this paper is to explore and describe the perspectives of caregivers of young children aged 3-7 in Singapore, regarding GenAI chatbots in learning. I addressed specifically how caregivers used GenAI chatbots in joint learning activities with their children, and their perspectives regarding its use in learning.

As I consider the impact of GenAI chatbots on children, I am struck by the sense of joy and wonder they bring. My observations resonate with the insights by Epley et al. (2007), who noted that children often anthropomorphise the non-living, a tendency amplified in their interactions with GenAI chatbots. This connection prompts questions and compels future research about digital learning companionship, and how it influences a child's approach to learning. I have also observed

GenAI's dual role in content learning and creativity, which provides opportunities for exploration and expression. However, I am also mindful of the need to maintain balance – to ensure that GenAI supports rather than substitutes for a child's learning experience. Caregivers in my study emphasize nurturing original thought and innovation, a perspective that I share and believe is crucial for the healthy development of young minds.

Crompton and Burke (2024) had earlier highlighted that educators use GenAI to assist learners, streamline tasks and tailor learning to individual needs. There is a difference in how GenAI chatbots are used by caregivers in this study when compared to educators as highlighted by these authors: namely, the absence of using GenAI for task automation in home settings. This could suggest that caregivers and educators perceive and apply GenAI chatbots differently. This difference raises interesting questions about the roles of GenAI chatbots in the different contexts of home and school, and warrants further investigation.

One challenge for caregivers is overcoming their resistance to technology, as it might hinder the integration of innovative tools like GenAI when learning takes place at home. To address this, schools can play a crucial role in cultivating caregiver AI literacy. But offering workshops, guides and success stories do not merely promote GenAI tools for learning; it also creates a learning ecosystem where children, caregivers and educators see technology as a valuable tool for innovation and learning.

I recognise the reality of the early stage of development that GenAI chatbots are currently in – this poses a challenge for widespread adoption by stakeholders in the learning community. Additionally, caregivers expressing concerns about the quality of GenAI interactions and output, highlights the need for ongoing improvement. Especially for tools aimed at young learners, robust monitoring and tailored responses are critical, as GenAI should enhance learning without being overwhelming or inappropriate. Implementing such mechanisms isn't just technical – it's about developing a generation of learners who can constructively engage with technology alongside their caregivers and teachers.

The safety of children when interacting with GenAI chatbots is crucial. Global entities like the United Nations Educational, Scientific and Cultural Organization (UNESCO) emphasize data protection and age-appropriate guidelines (Miao et al., 2023). Platforms like EdnoAI should clearly communicate the safety measures they have in place, to build trust and promote responsible usage. Interestingly, caregivers seem less concerned about academic integrity issues related to GenAI chatbots as compared to educators, whose concerns were noted by Kishore et al. (2023)

and Grassini (2023). This discrepancy prompts reflection on the factors driving these differing perspectives.

The practical challenges of implementing GenAI chatbots in diverse educational settings highlight equity and access issues. Inspired by higher education practices as described by Kurtz et al. (2024), I propose professional learning and infrastructure investments as ways to bridge resource gaps between schools. This approach aims to ensure that all learners can benefit from high-quality integration of GenAI chatbots in their learning experiences.

While AI has been in the educational landscape for some time, GenAI represents a significant advancement in capabilities, as its potential to personalise learning experiences is immense. However, the confusion between GenAI and other AI systems, such as Siri, can create misconceptions about GenAI's role. Moreover, ignorance of GenAI's unique capabilities might cause caregivers to miss out on its full potential. A prelude to this study, which can certainly still be done in future, could have been to investigate caregivers' understanding of AI in general and their specific knowledge about GenAI. This could help us understand if conflation arises due to lack of awareness, familiarity bias or other reasons. We could also glean insights on whether such potential confusion affects caregivers' expectations of GenAI's capabilities, or their willingness to use it for their child's learning.

Finally, as I consider the tension between traditional learning methods and automated solutions, I am reminded of the need to exercise caution: to not prioritise immediate responses at the expense of exploration and resilience in problem-solving. Caregivers and all stakeholders must ensure that technology tools such as GenAI chatbots enhance rather than replace the depth and diversity of human inquiry.

6 Limitations and Conclusion

6.1 Limitations

Some limitations of this study include:

Allowing caregivers to choose how to use the GenAI tool with their children, can lead to different approaches which produce inconsistent data, making it difficult to compare and analyse. Without a standardised protocol of interaction, it is challenging to determine the use cases of GenAI chatbots on learning.

Analysing interaction logs from just two weeks of GenAI chatbot use can result in insufficient data to observe sustained usage patterns and outcomes. Users might still be in the initial learning phase, and their interactions may not reflect settled, mid- to long-term behaviour.

The pace at which GenAI chatbot technologies evolve could be quicker than the pace of educational research, making it challenging to keep findings current and relevant. Additionally, there is a risk of bias in GenAI chatbot output due to data used for training it, which might not be representative of all viewpoints.

6.2 Conclusion

Caregivers are using GenAI chatbots with their children to help them learn better. Not everyone is ready to use this relatively new technology; some caregivers are wary of it and face uncertainties, and that can make it difficult for proper school-home partnerships to get off the ground and result in meaningful, sustainable learning supported by GenAI chatbots.

Caregivers appreciate how good GenAI chatbots can be for young children's learning. It must also be made sure that when young children use GenAI chatbots, they are safe, and the tool is working appropriately. But challenges lie ahead because there are many considerations, such as making sure that it is equitable for all stakeholders involved. As GenAI evolves, caregivers and educators will have to keep learning and tweaking how they use it for learning at home, and in schools.

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I hereby declare that I have written this thesis independently and that all contributions of other authors and supporters have been referenced. The thesis has been written in accordance with the requirements for graduation theses of the Institute of Education of the University of Tartu and is in compliance with good academic practices.

Muhammad Imran bin Hassan

31st May 2024

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Appendix A - Characteristics of EdnoAI, the chosen GenAI chatbot

1. Description

Ednovation (<https://ednovation.com>) is a pre-school (ages 2-6) education provider in Singapore; this includes physical pre-school and enrichment centres, and pre-school curriculum development. In March 2023, Ednovation announced the public rollout of the free-to-use GenAI chatbot it initially branded as EdGPT (Lee, 2023). Since then, it has been renamed EdnoAI (<https://ednovation.com/ednoai>) (Ednovation, n.d.). It was developed using ChatGPT, a publicly available Generative AI chatbot, using an application programming interface (API) (Lee, 2023). Ednovation has claimed that it has tailored EdnoAI to be able to produce output which is suitable for young children, for example, by assigning it a gender identity - in contrast to ChatGPT (Lee, 2023). I asked the same prompt (“Tell me about atoms”) to EdnoAI (Ednovation, personal communication, 2 March 2024) and ChatGPT-3.5 (OpenAI, personal communication, 2 March 2024) and I found that the lexicon, tone and volume of output for EdnoAI accommodates younger learners, as can be seen in the appended images.

As no download or registration is needed for EdnoAI, this keeps its use simple and straightforward. The age of the child can be selected with a dropdown menu (see appended image). Prompts can be entered only via audio, and all output is simultaneously and spontaneously produced in text and audio. As discussed in the theoretical framework section, this is an ideal modality for the interaction of young children with the chatbot, as it is possible that their keyboarding and reading skills have yet to fully develop. At the point of publication, it is unknown if any ringfencing to provide layers of safety and privacy has been built into EdnoAI – I made sure to remind caregiver participants about the need for appropriacy and security during chatbot interactions when conducting the online workshop.

EdnoAI has no inherent way to store or record interactions - interactions are not logged automatically. This necessitates another means to record such interactions, such as using the device itself to take photographic records of its own screen (i.e., taking “screenshots” or “screencaptures”).

Figure 2. EdnoAI output for the prompt “Tell me about atoms”

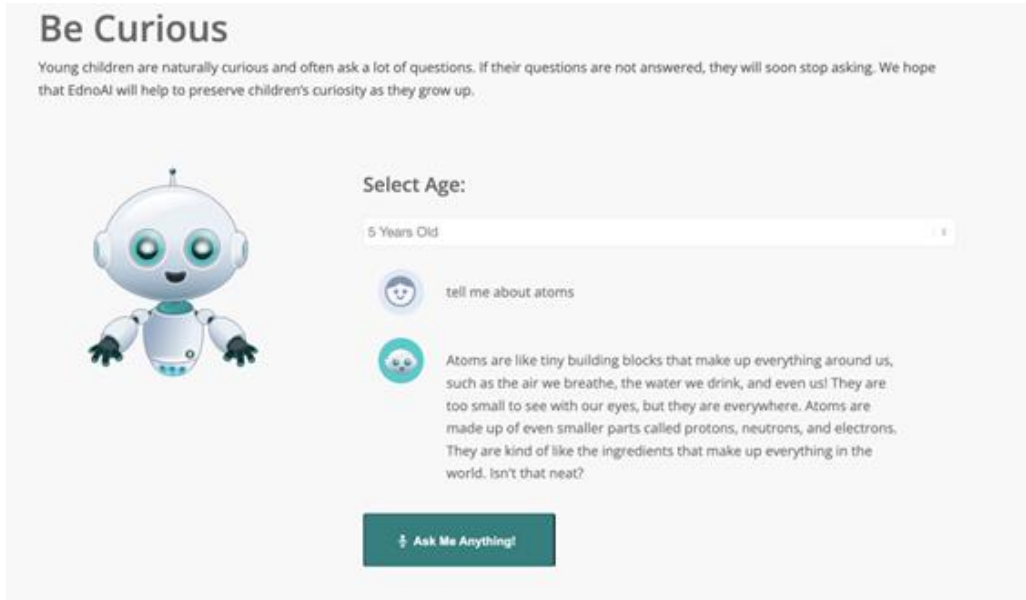
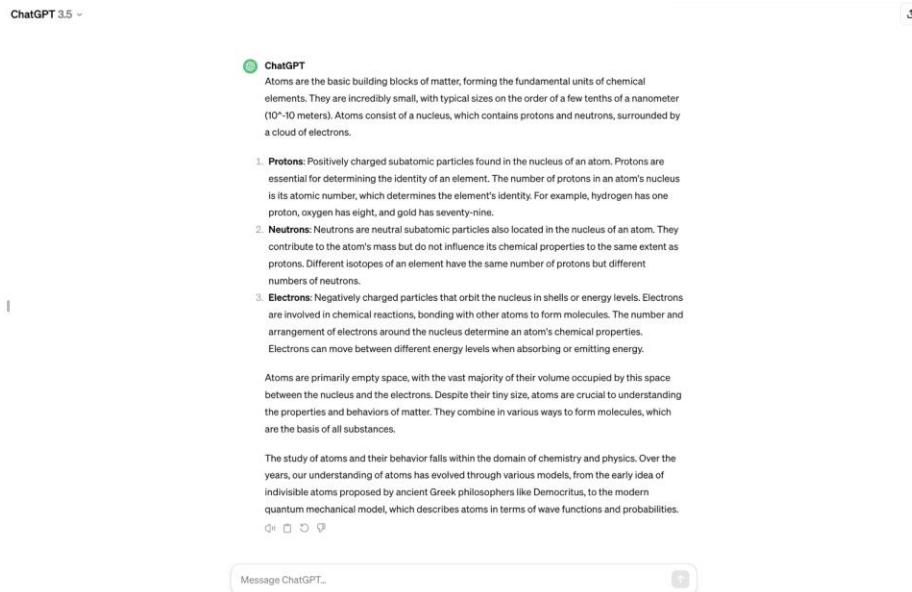


Figure 3. ChatGPT-3.5 output for the prompt “Tell me about atoms”




Appendix B – Demographic details of study participants


ID	Caregiver Role	Children	Participated in Phase 3?
P1	Mother	6 years old	No
P2	Father	6 years old	Yes
P3	Mother	4 years old	No
P4	Mother	5 years old	Yes
P5	Mother	6 years old	Yes
P6	Father	3 & 7 years old	No
P7	Father	7 years old	No
P8	Father	7 years old	Yes
P9	Mother	3 years old	No

Appendix C

Workshop for Caregivers: Materials



Online Workshop - Understanding Generative AI Chatbot Usage among Caregivers of Young Children



Muhammad Imran bin Hassan,
University of Tartu

HELLO! I'm...

Imran

- Working fulltime in an global EdTech company
- Enrolled in (a fulltime!) Master of Arts in Educational Technology at the University of Tartu



What we'll do TONIGHT.



01

Introduction



02

What the study is
about



03

What Generative AI
(GAI) chatbots are



04

An overview of your
involvement



05

Introduction to the
GAI tool and hands-on



06

Q & A



01 Introduction

Some formalities!



Privacy statements

Your data will be treated confidentially and used solely for research purposes.

Only the researcher (Muhammad Imran bin Hassan) will have access to the raw data (e.g. audio files, video files, screenshots, images, and so on)

All responses will be anonymized, and steps will be taken to ensure that no personally identifiable information is shared.

The aggregated findings will be used to inform educational practices



Privacy statements

All data will be securely stored on encrypted Office 365 servers and safekept by the University of Tartu

Your participation is voluntary, and you can withdraw at any time without consequences

Rest assured that your privacy is our priority

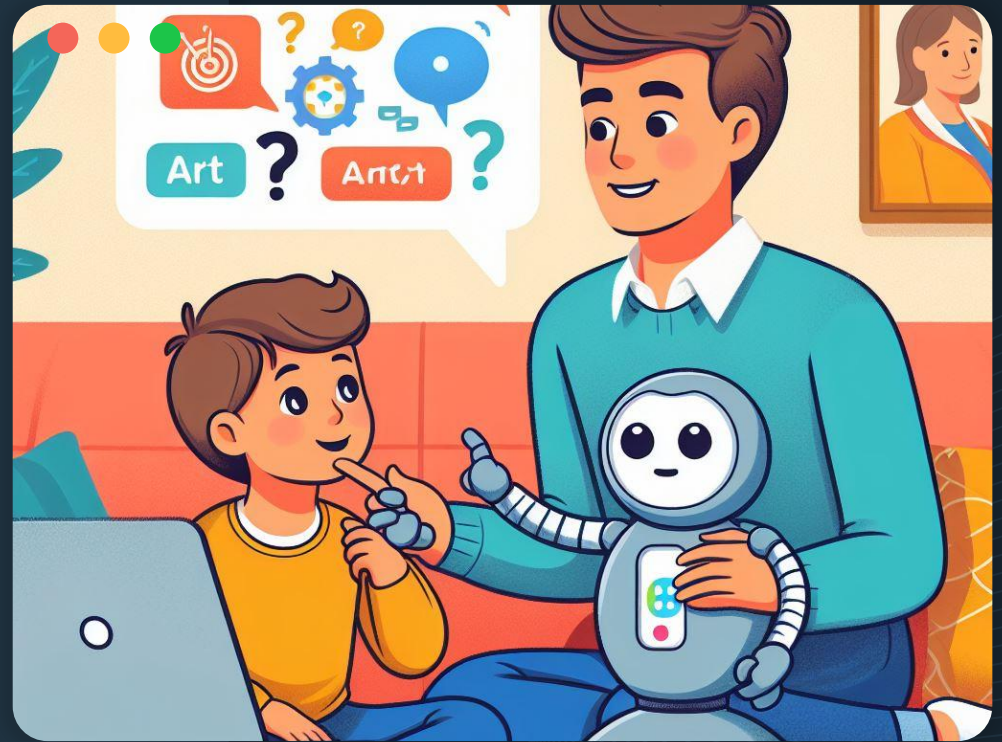


02 What the study is about

How might you use Generative AI chatbots alongside your child?

Our study focuses on understanding your perspectives, practices, and concerns related to using chatbots alongside your children.

By participating, you contribute to educational technology research and help shape schools' frameworks in the use of chatbots for teaching and learning





03 What GAI Chatbots are

What are Generative AI Chatbots?

Chatbots

Specialized software programs designed for natural language interaction

GAI Chatbots

adapt to user behaviour, providing personalised responses and valuable feedback + learns from existing examples to produce creations

What GAI Chatbots are also known as

Conversational AI, Generative AI

What are Generative AI Chatbots?

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adapt to user behaviour, providing personalised responses and valuable feedback + learns from existing examples to produce creations

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Conversational AI, Generative AI



04 An overview of your involvement

What will you do?

Now

Online workshop

For 2 weeks after today

Use a specific GAI chatbot alongside your child OR by yourself
3-5 times

[Optional]

Follow-up 1-hour interview

At the end of 2 weeks

Submit screenshots of your interactions to a unique, private online folder which will be emailed to you



05 Introduction to EdnoAI and hands-on <https://ednovation.com/ednoai/>

What you need to do for the next 2 weeks



Access <https://ednovation.com/ednoai/>

Interaction: Engage with the chatbot alongside your child for two weeks – recommended number of times: 3-5 in total

Variety of Topics: Explore different topics—homework, science, language, family activities etc.

Capture Screenshots: After each interaction, take screenshots of the chatbot's responses. Upload this in the online folder which will be emailed to you

Some dos and don'ts


Do use it in any context or situation - don't feel restricted to what you think is the "correct" one

Do take on the spirit of "exploration"

Do remember to take screenshots

Don't enter personally identifiable information e.g. names, contact numbers, email addresses, places of residence

Refrain from discussing sensitive or inappropriate content



06 Q & A

CREDITS.

Presentation Template: [SlidesMania](#)

Sample Images: [Unsplash](#)

Fonts used in this presentation: Roboto Mono and **Roboto Bold**



Free themes and templates for
Google Slides or **PowerPoint**

NOT to be sold as is or modified!

Read [FAQ](#) on slidesmania.com

Do not remove the slidesmania.com text on the sides.

Sharing is caring!



Appendix D – Interview Transcripts: P2

1

00:00:02.150 --> 00:00:05.879

Muhammad Imran Bin Hassan: Right. So the recording has started. So let's begin the interview.

2

00:00:06.326 --> 00:00:11.079

Muhammad Imran Bin Hassan: So I'm gonna start by asking if you can share generally

3

00:00:11.140 --> 00:00:15.880

Muhammad Imran Bin Hassan: how you use the Generative AI Chatbot alongside your child...

4

00:00:15.970 --> 00:00:17.550

Muhammad Imran Bin Hassan: just in general terms.

5

00:00:17.830 --> 00:00:24.719

P2: So in general, I use a phone right? So I had the interface locked in,

6

00:00:25.106 --> 00:00:27.480

P2: via one of the browsers in my phone

7

00:00:27.810 --> 00:00:31.289

P2: so I showed my child. I said, you can ask this

8

00:00:31.895 --> 00:00:33.970

P2: tool or this phone anything,

9

00:00:34.240 --> 00:00:49.750

P2: because there was an icon. So my child automatically asked the robot. So it came from her. She said, Hi, robot! And then she asked the questions that she asked. So that was the first time, and subsequently it was the same procedure. She associated the

10

00:00:50.290 --> 00:00:55.029

P2: website with a... with a robot, and asked the question, yah.

11

00:00:55.540 --> 00:01:02.809

Muhammad Imran Bin Hassan: So, ah, how... Did you guide her? And if so... like, how did you guide her in what kind of questions to ask?

12

00:01:03.330 --> 00:01:06.679

P2: Okay. So I just informed her

13

00:01:06.830 --> 00:01:08.639

P2: you can ask any question,

14

00:01:08.780 --> 00:01:14.360

P2: right? And then ...there, thereafter she asked the questions, the one that I uploaded in the

15

00:01:14.420 --> 00:01:17.480

P2: shared drive, Sharepoint of the University.

16

00:01:18.330 --> 00:01:23.290

Muhammad Imran Bin Hassan: So, so you left it entirely up to her. Did you like, intervene in, at any point?

17

00:01:24.239 --> 00:01:42.809

P2: I intervened after she asked once, I... one question. I asked her, I told her, I said, that look, you can ask other questions. What else you want to ask in relation to this first question, or the response, or in relation to other things that you want to ask, bearing in mind that, If I recall correctly...

18

00:01:42.820 --> 00:01:46.979

P2: once the answer is given in text, the tool also has

19

00:01:47.160 --> 00:01:49.520

P2: a voice. If I'm not wrong, right? To...

20

00:01:49.849 --> 00:01:54.519

P2: you know, speak. I mean, they generated a voice of what...from text to speech, like, yah.

21

00:01:54.810 --> 00:01:55.970

Muhammad Imran Bin Hassan: Yes, correct. Yeah.

22

00:01:56.602 --> 00:02:01.929

Muhammad Imran Bin Hassan: Okay. So, moving on. So how useful did you find the chatbot to be?

23

00:02:03.210 --> 00:02:08.449

P2: Okay, useful... I, I would say, very useful from the angle of engaging the child.

24

00:02:08.866 --> 00:02:22.029

P2: Because, you know, it is intuitive right? And there is the element of interactivity between the child and the interface, that... though that did not require too much intervention for me, like as a parent.

25

00:02:24.870 --> 00:02:30.239

Muhammad Imran Bin Hassan: Okay, do... do you think there could be any drawbacks of this, this chatbot?

26

00:02:31.920 --> 00:02:37.349

P2: Yeah, the drawbacks are... is because some of the answers are very much...

27

00:02:39.220 --> 00:03:04.671

P2: quite lengthy la, huh? So typically in a conversational style, right? We will have a question asked by a kid, and then a few sentences, or one or 2 or more sentence, right, to engage the child. So here it's like a typical Gen AI, you know. You ask a question, then, there is a reasonable amount of details, right? But in my view, if this was meant to be a child-appropriate kind of engagement,

28

00:03:05.040 --> 00:03:08.549

P2: it could be tweaked lah so that the first answer may not be too long.

29

00:03:09.820 --> 00:03:14.089

Muhammad Imran Bin Hassan: I see. Is there...are there any other... any other ways it could have been tweaked?

30

00:03:14.360 --> 00:03:15.080

Muhammad Imran Bin Hassan: Or could be tweaked?

31

00:03:15.080 --> 00:03:23.219

P2: No, no, if images, perhaps. Because it's currently just text, right? So if there could be images to supplement the text, right? I would think

32

00:03:23.590 --> 00:03:26.470

P2: a child will be more engaged and interested.

33

00:03:27.310 --> 00:03:31.659

Muhammad Imran Bin Hassan: Okay. So that's, that's your wish list for there to be like images, right?

34

00:03:32.520 --> 00:03:33.310

Muhammad Imran Bin Hassan: So...

35

00:03:33.310 --> 00:03:38.799

P2: This is, yeah. Wishlist not so, because this is more of ideas, of how I think

36

00:03:38.810 --> 00:03:41.040

P2: it can be more engaging. But it...

37

00:03:41.160 --> 00:03:52.990

P2: research is required, right? To know whether the kid responds better to an image or the current approach where it's text. And then text to speech is sufficient to achieve a certain level of ah, interest.

38

00:03:53.170 --> 00:04:01.140

Muhammad Imran Bin Hassan: Right. Have, have you used other Gen AI chatbots with your kid before, like, for example, Copilot or...

39

00:04:01.250 --> 00:04:02.680

Muhammad Imran Bin Hassan: ChatGPT?

40

00:04:02.900 --> 00:04:04.000

Muhammad Imran Bin Hassan: I see.

41

00:04:04.000 --> 00:04:08.820

P2: ChatGPT with my other kids lah, but not the 6 year old one, yeah.

42

00:04:09.120 --> 00:04:13.069

Muhammad Imran Bin Hassan: Okay. So, so let's... let's talk about your whole family, then not, not just the 6 year old kid.

43

00:04:13.405 --> 00:04:13.740

P2: Okay.

44

00:04:14.200 --> 00:04:29.909

Muhammad Imran Bin Hassan: And let's not restrict it to this, this one, which is called EdnoAI. Let's consider chatbots in general, like Gen, Gen AI chatbots in general. So how might your family integrate the use of such chatbots into your lives?

45

00:04:30.950 --> 00:04:33.854

P2: For life. I...

46

00:04:36.390 --> 00:04:41.159

P2: I've not tried, but I thought an opportunity for my older kids would be...

47

00:04:41.170 --> 00:04:48.570

P2: so think about what courses to take in their post-graduate or post-secondary education. You know, the kind of careers they want to

48

00:04:48.940 --> 00:04:54.520

P2: explore in the future. I think that one is something that you know, haven't done yet, but a possibility.

49

00:04:54.580 --> 00:05:08.919

P2: But more, I think, for the schoolwork. I think they're already doing some form of research, you know, doing assignment and then asking tools that... I'm not aware what exact tools are using, right? Yeah. So schoolwork and then planning for the future.

50

00:05:09.510 --> 00:05:14.929

Muhammad Imran Bin Hassan: Okay. So you, you know that your older kids are already using Gen AI for their schoolwork.

51

00:05:15.190 --> 00:05:28.379

P2: Yeah, correct, roughly, roughly, I know, but I have not engaged them and talked to them what tool they use and how to use it, or are they using it to do some sort of, you know... supplementing their schoolwork. Not, not in detail.

52

00:05:28.700 --> 00:05:40.650

Muhammad Imran Bin Hassan: I see. Okay. So let's, let's move on to the next set of questions, which is quite related to our last point about schoolwork and learning. So what are your thoughts regarding...

53

00:05:40.680 --> 00:05:45.239

Muhammad Imran Bin Hassan: schools using Generative AI chatbots for learning.

54

00:05:46.980 --> 00:05:47.839

P2: I think

55

00:05:47.990 --> 00:05:51.559

P2: the Generative AI chatbots are already here.

56

00:05:51.650 --> 00:05:57.200

P2: Like it or not, you know. It is accessible to students. It is a basic

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00:05:57.960 --> 00:06:06.880

P2: necessity, I would think. For students to, ah sorry, for schools to teach, you know, right? The use of chatbot in their schoolwork.

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00:06:08.980 --> 00:06:10.150

P2:Not sure

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00:06:10.300 --> 00:06:11.999

P2: the extent to which it has been

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00:06:12.090 --> 00:06:19.800

P2: pervasive, or it's been maturing in the school, right? So at this stage, what I can offer is, as a opinion, is more of a...

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00:06:20.180 --> 00:06:22.089

P2: teaching how to use the tools is very important.

62

00:06:22.260 --> 00:06:26.260

P2: And then, you know, in terms of based on what... it's not... the

63

00:06:26.410 --> 00:06:43.859

P2: student has to be, or the students have to use it ethically, like you know whatever, technological guidelines, right? That is, set by the school, I mean, similar to, you know, in the past, there were no phones, now there are phones and laptops and all. There are certain guidelines on the usage of such technology. I would

64

00:06:44.450 --> 00:06:47.869

P2: look at Generative AI in a similar vein lah. I mean

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00:06:48.030 --> 00:07:01.499

P2: they have not too long ago, but still quite some time ago, the use of Internet, such as, right, for the assignments. Yes, I think it is another tool, another resource for students to help them in their learning generally lah.

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00:07:01.900 --> 00:07:06.789

Muhammad Imran Bin Hassan: Right? So, so that's from the perspective of students using the Gen AI.

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00:07:07.980 --> 00:07:13.030

Muhammad Imran Bin Hassan: Let's, let's talk about the teachers, because even if your youngest is only 6 years old.

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00:07:13.466 --> 00:07:28.450

Muhammad Imran Bin Hassan: It is a possibility, although I don't know whether you are aware it is a possibility, that maybe your 6 year old child's teachers are already using Gen AI, for example, to create lesson materials or to come up with...

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00:07:28.939 --> 00:07:42.840

Muhammad Imran Bin Hassan: you know, how to maybe... come up with an...a paragraph to email parents, for example. So what are your thoughts regarding the teachers, even at your child's school, the one who is 6 years old, using these Gen AI chatbots.

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00:07:43.470 --> 00:07:52.229

P2: Well, if doing so allows them to focus on teaching and to reduce admin work, and they can have better work-life balance, I'm

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00:07:52.280 --> 00:07:56.949

P2: very, very supportive of it lah. So there are few angles, right? One is the angle of

72

00:07:57.400 --> 00:08:15.600

P2: quality of content, right? That one, if through Gen AI, the quality of teaching materials and content can be much, much improved, by all means! Second, from the angle of the well-being and you know, productivity of the teachers. Yeah, why not, right? So I think it's important. I think thirdly is also...

73

00:08:15.600 --> 00:08:28.943

P2: how it could be a, a stepping stone, right, for kids of the preschool age ah, to be familiarized with such technology and to, you know, have the first glimpse and first

74

00:08:29.430 --> 00:08:40.470

P2: engagement with the tools and technology, so that by the time they go to primary school, and beyond, it will be part of their, you know, a repository or their toolbox, in learning.

75

00:08:41.090 --> 00:08:50.709

Muhammad Imran Bin Hassan: Right. So, so that's quite interesting. Because this tool that you use, which is called Edno AI, I think I mentioned during the workshop that it's developed locally.

76

00:08:50.820 --> 00:09:04.310

Muhammad Imran Bin Hassan: So the people who develop... developed it locally, they are actually also overseeing a few preschool centres. And at these preschool centres. The children are already using Gen AI, right? So...

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00:09:04.520 --> 00:09:04.730

P2: Hmm...

78

00:09:04.730 --> 00:09:16.880

Muhammad Imran Bin Hassan: Not just this, this particular one, but also some others which generate images. Right. So if your child were to also do that in school at this age, at 6 years old, okay...

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00:09:17.421 --> 00:09:19.710

Muhammad Imran Bin Hassan: What are your perspectives about that?

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00:09:19.960 --> 00:09:21.280

P2: Well, I...

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00:09:21.430 --> 00:09:48.350

P2: personally, I... if you, if you ask me right, I don't really have a concern or... a opinion. I mean, if that's the latest technology, you know, that is required to achieve the minimum standards of school, right? Then it's a given, right? It's a given that... the ... just like, how students, I mean, teachers use Google search engines. You know, software, you know, to design materials, then, is just another one in the whole, you know, teaching

82

00:09:48.970 --> 00:10:02.140

P2: tools are, right? Toolbox for them to create class, create content? Perhaps they might be using it. I mean, case in point. A couple of days ago my daughter talks about how the teacher, you know, shared with them

83

00:10:03.440 --> 00:10:07.529

P2: examples are of “Kampong”, you know. Then, from the way she described, ah,

84

00:10:07.570 --> 00:10:28.729

P2: it's so detailed and so vivid to the... that I half-suspect that, either the teachers are very skilled or they have a central team that does the materials, or it could be, well be they have used Gen AI to create images, or to do lesson plan, ah, right? So it may well be already implemented, but just parents are not officially involved, or informed, sorry.

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00:10:29.120 --> 00:10:30.939

Muhammad Imran Bin Hassan: Right. Would you prefer to be informed?

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00:10:31.540 --> 00:10:37.470

P2: Doesn't really matter to me, lah. What's more important is the output and outcome. Not necessarily the process. Yeah.

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00:10:37.670 --> 00:10:38.220

P2: right?

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00:10:38.220 --> 00:10:50.720

Muhammad Imran Bin Hassan: Okay. So I think you mentioned a bit about this. But maybe you can elaborate a bit more. So how do you think this kind of technology will have an impact on your child's learning? Let's talk about the 6 year old child.

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00:10:50.720 --> 00:10:54.390

P2: Yeah. So I would say that from the level of

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00:10:55.020 --> 00:10:56.679

P2: sophistication, of

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00:10:56.770 --> 00:10:59.143

P2: engaging the materials, right? That is number one, ah.

92

00:10:59.807 --> 00:11:18.209

P2: Here's, here's what's on my mind, right? If without Gen AI, the between 1 to 10, the quality of materials in terms of thoroughness, in terms of relevance, in terms of even child appropriateness is, say, a level of 5 or 6 ah, right? Here bearing in mind that I would, I would expect

93

00:11:18.210 --> 00:11:33.369

P2: any preschool teachers to be, you know, at least trained in early childhood at the certificate level, meaning that the kind of materials that they choose right? They've already gone through the process, that it's child-appropriate, the languages that they use is, you know, contextualized to the needs of the child. Right?

94

00:11:33.640 --> 00:11:46.770

P2: But with Gen AI they're able to up their ante to increase their skills and competency level to the extent that the materials of teaching and even the mode of teaching right goes up to 7 to 8. Right? Yeah. So it

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00:11:47.170 --> 00:11:58.816

P2: means that parents will expect more, right? That is a given, that you are able to produce this kind of content. And this kind of classroom teaching... facilitation or teaching,

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00:11:59.420 --> 00:12:17.760

P2: I would say, design, right? Yeah. Compared to the past, I mean, compare our time Dulu in, in, in school, right? We have the OHP right? No normal OHP, you know, it's Powerpoint. So that's a certain standard expected of Powerpoints. So now, with Gen AI, I would think the standards of teaching and content will be much higher than before.

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00:12:18.100 --> 00:12:18.600

P2: Right.

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00:12:18.600 --> 00:12:19.730

Muhammad Imran Bin Hassan: Okay, thanks.

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00:12:20.080 --> 00:12:28.740

Muhammad Imran Bin Hassan: Okay. Last, last main question. Is there anything you would like to know more about regarding the use of such technology in your child's learning?

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00:12:29.930 --> 00:12:31.790

P2: The technology. I'm not...

101

00:12:32.010 --> 00:12:37.730

P2: ...not so many questions. But I am interested to know what is the pathway for teachers in the future.

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00:12:38.092 --> 00:12:51.689

P2: Back to my other point of standards ah, right? So if today, this is the standards of teaching in terms of what I've said just now, with Gen AI there's a boost, right? There's an injection of, you know, a whole new way of doing things.

103

00:12:51.890 --> 00:13:05.570

P2: What do we, as parents, or, as you know, general public ah, expect of teachers, you know. Yeah. So I won't say teachers alone. I think it's not fair to just put it on teachers. Of educational institutions in having

104

00:13:06.265 --> 00:13:11.220

P2: their materials and their whole pedagogy and curriculum, develop

105

00:13:11.670 --> 00:13:14.439

P2: you know, with the AI

106

00:13:14.600 --> 00:13:15.730

P2: incorporated ah.

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00:13:16.150 --> 00:13:21.330

Muhammad Imran Bin Hassan: Hmm, hmm. And, and any reason why you're interested in this, interested to know more about this?

108

00:13:22.990 --> 00:13:24.400

P2: So that I know what I'm

109

00:13:25.030 --> 00:13:27.009

P2: paying for quote, unquote in terms of

110

00:13:27.226 --> 00:13:27.660

Muhammad Imran Bin Hassan: Haha!

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00:13:27.660 --> 00:13:56.440

P2: taxpayer, in terms of materials, you know. I mean fees lah, right? Yeah. I mean, this should be my last kid in, in kindergarten. But I, I, If I were to rewind 10 years ago, right? I got 3, 4, 5 kids in kindergarten. You know I pay for classes, for private centres, and tuition and all right? If, let's say, those thing that they do can be done, you know, at a much cheaper price, but they are charging me so high a premium in the past, it's no longer a premium now ah! So that is a practical consideration actually, yeah.

112

00:13:56.610 --> 00:13:57.600

Muhammad Imran Bin Hassan: Yah. Yah.

113

00:13:57.930 --> 00:14:01.149

Muhammad Imran Bin Hassan: Okay, thanks. Thanks so much. I'm gonna stop the recording now.

114

00:14:01.380 --> 00:14:02.550

P2: Okay, cool. Yeah.

Appendix D – Interview Transcripts: P4

1

00:00:03.700 --> 00:00:13.870

Muhammad Imran Bin Hassan: Okay, thanks for joining me on this interview. So we'll get started with the questions. First off, can you share how you use the chatbot alongside your child?

2

00:00:15.039 --> 00:00:22.469

P4: Okay? So the initial part, I actually just let him ask any questions that he wants. So if you actually look at the screenshots

3

00:00:22.680 --> 00:00:35.219

P4: like a lot of it is like, he's jumping like from topic to topic. So there's no like, theme or anything like that. But then, when, after we did it for a few times. I actually tried to steer it a little bit.

4

00:00:35.260 --> 00:00:39.070

P4: Like if let's say, he asked like a question about let's say, the sun.

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00:00:39.120 --> 00:00:45.150

P4: and then I'll try to steer it and say like, Oh, do you wanna ask something about the moon or something else about space? Or do you wanna ask

6

00:00:45.200 --> 00:00:49.030

P4: like the distance of the sun or the size of the sun, something like that? Like

7

00:00:49.340 --> 00:00:52.119

P4: initially, it was really haphazard. But then

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00:00:52.200 --> 00:00:56.499

P4: subsequently, I, I tried to steer it a bit. So that's how I did it with him.

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00:00:58.080 --> 00:01:04.449

Muhammad Imran Bin Hassan: So what was the thinking behind trying to steer that conversation with the chatbot?

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00:01:05.090 --> 00:01:20.769

P4: Cause I was hoping that if, let's say, he asked like one question about specific topic, I was hoping that if I can steer him. Then he can learn more about the topic within that one section instead of, you know, like there's no theme, is, it? Feels a bit like,

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00:01:21.420 --> 00:01:28.499

P4: like you're just learning about different things, like at the same time. But you know, like, I was hoping there's like some kind of like flow.

12

00:01:28.550 --> 00:01:32.369

P4: Which is why I tried to steer him a bit on some of the sessions.

13

00:01:33.355 --> 00:01:36.610

Muhammad Imran Bin Hassan: So how, how do you? You mentioned something about theme,

14

00:01:36.730 --> 00:01:40.310

Muhammad Imran Bin Hassan: right? Were there any themes that

15

00:01:40.340 --> 00:01:43.790

Muhammad Imran Bin Hassan: you thought you wanted to steer him towards.

16

00:01:44.190 --> 00:01:51.690

P4: No, for the theme itself. I didn't tell him like, Oh, let's talk about animals today. Let's talk about food today. I just let him ask the first question.

17

00:01:51.990 --> 00:02:00.319

P4: So, depending on what question is, let's say it's about animals. Then, you know, then I was sort of steer like, within the animal. The theme of animals.

18

00:02:01.230 --> 00:02:01.670

Muhammad Imran Bin Hassan: Okay.

19

00:02:01.670 --> 00:02:05.900

P4: But the first question is always, he is the one who decides what the topic is.

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00:02:06.020 --> 00:02:06.690

P4: Yep.

21

00:02:06.850 --> 00:02:07.760

P4: okay, yeah.

22

00:02:08.160 --> 00:02:15.260

Muhammad Imran Bin Hassan: Right so looking back. And, and if you want to, I hope you you have your phone with you. If you want you can look through the screenshots again.

23

00:02:15.300 --> 00:02:18.330

Muhammad Imran Bin Hassan: It's probably on your phone, right? So if you want to, you can.

24

00:02:19.319 --> 00:02:23.790

Muhammad Imran Bin Hassan: So, looking back right, how useful did you find the chatbot to be?

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00:02:24.710 --> 00:02:27.099

P4: I think that was very, it's very good.

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00:02:27.980 --> 00:02:29.750

P4: Cause, I mean,

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00:02:29.760 --> 00:02:33.650

P4: my, my son is very, very curious. He has a lot of questions.

28

00:02:34.417 --> 00:02:44.780

P4: In addition, he can ask me a lot of questions about many different things. So I think he was always looking forward to like, every time I will, I'll say like, Oh, let's go talk to Edno cause he calls it Edno right, and not AI right.

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00:02:44.910 --> 00:02:49.999

P4: Like he will get very excited like, Oh, okay, I have this question to ask, Edno. And the things like that. So

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00:02:50.557 --> 00:02:57.540

P4: yeah, that was my experience with the question was like, how, how do we find? How do I find it? Right? Like.

31

00:02:57.540 --> 00:02:58.930

Muhammad Imran Bin Hassan: How useful do you find it?

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00:02:59.150 --> 00:03:17.100

P4: Yeah, yeah, I think it's useful, although I did have like a concern when I was like doing it. Cause there was one part where my son actually wanted to do math. So he was like, Oh, 100 plus 100! How much is it? And then I sort of had this concern like, Oh, was it like, you know, in the future, if, like kids use this, will it become a

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00:03:17.200 --> 00:03:20.769

P4: like a crutch, like a handicap, a crutch, or a handicap.

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00:03:20.850 --> 00:03:26.139

P4: Like they will, you know, instead of like finding answers on their own like, say, for example, 100% that they can use it

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00:03:26.170 --> 00:03:27.459

P4: to do their homework

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00:03:27.500 --> 00:03:29.630

P4: instead of like thinking out all the methods.

37

00:03:30.510 --> 00:03:33.790

P4: And I don't know what's the management for that.

38

00:03:34.440 --> 00:03:35.170

P4: Yeah, yeah.

39

00:03:35.620 --> 00:03:39.090

Muhammad Imran Bin Hassan: Were there any other concerns that struck your mind?

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00:03:40.209 --> 00:03:45.060

P4: Another concern is, I think there was some, let me see. What was it that he asked?

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00:03:45.390 --> 00:03:50.429

P4: Oh, I think one of the questions that my son asked is, Do human children come from an egg?

42

00:03:50.820 --> 00:04:00.349

P4: And then, when he asked that, I kind of like, oh, no. Like, like, I wonder if the response is going to, like, steer towards like sexual reproduction, and I feel like he's a bit too young for that.

43

00:04:00.500 --> 00:04:02.690

P4: But it wasn't like the response was actually a

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00:04:02.720 --> 00:04:12.589

P4: bit more generic. It just says that...let me see. It says that human babies are from inside a special place called the mother's womb, like, like it was a bit more generic.

45

00:04:12.990 --> 00:04:25.709

P4: But, and, that is like my son. After he got the answer he moved on to something else, so I don't know whether, if he had continued that line of questioning, whether, like eventually, the response will become like, you know, oh, sexual reproduction da da da.

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00:04:25.890 --> 00:04:29.750

P4: So I think there was like a bit of concern there. But it didn't happen. So yeah.

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00:04:30.000 --> 00:04:35.509

Muhammad Imran Bin Hassan: So can I, can I paraphrase your concern? Your concern is that you don't know whether

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00:04:35.812 --> 00:04:40.799

Muhammad Imran Bin Hassan: when he, when he continues the conversation. What kind of information the chatbot will give? Is that right?

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00:04:40.800 --> 00:04:42.750

P4: Yeah. Yes.

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00:04:43.050 --> 00:04:44.910

Muhammad Imran Bin Hassan: Okay. Any other concerns?

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00:04:47.300 --> 00:04:48.520

P4: Let's just see...

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00:04:51.220 --> 00:04:55.219

P4: Oh, I noticed something. I mean, I don't know whether ... how it's set up.

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00:04:55.918 --> 00:05:01.961

P4: But I realized that like, okay, like. For example, he actually asked a question about how fast is

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00:05:02.530 --> 00:05:05.259

P4: Lamborghini or sports car? Something like that.

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00:05:05.460 --> 00:05:09.819

P4: So I realized that the answer given right, the system of measurements, right, is actually use

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00:05:09.830 --> 00:05:15.810

P4: the American system, which is the imperial system, right? As opposed to, like, a metric system. So I don't know whether,

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00:05:16.060 --> 00:05:22.190

P4: like you know, if in the local Singapore context we use metric system. But then the answers given is like in the American

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00:05:22.420 --> 00:05:24.050

P4: imperial system.

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00:05:24.430 --> 00:05:25.020

Muhammad Imran Bin Hassan: Right.

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00:05:25.420 --> 00:05:26.729

P4: Something I noticed there.

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00:05:27.040 --> 00:05:27.700

Muhammad Imran Bin Hassan: Okay.

62

00:05:28.413 --> 00:05:32.489

Muhammad Imran Bin Hassan: Have you used other chatbots with your child before, other than Edno?

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00:05:32.810 --> 00:05:34.699

P4: No, this is my first and only time.

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00:05:35.040 --> 00:05:39.149

Muhammad Imran Bin Hassan: Okay, so like, looking ahead. How do you think your family

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00:05:39.890 --> 00:05:43.639

Muhammad Imran Bin Hassan: might integrate the use of such chatbots in your lives?

66

00:05:44.620 --> 00:06:01.410

P4: Honestly, I would continue using it. I mean, my son actually does say that, hey? Oh, can I still talk to Edno, even though, like we were supposed. I, I told him that we were done already like with the whole project, but he was like, Oh, can I still ask, Edno and say, Yeah, sure, I, I mean, it's it's open, right? Like I can still use it with him. Right?

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00:06:02.500 --> 00:06:08.509

P4: Yeah, I probably use it. I'll probably use it. When he asked me the questions. I don't know the answer to.

68

00:06:09.390 --> 00:06:14.803

P4: Like, sometimes he asked me like, Oh, like, how does electric? Where does electricity come from? I'm like, I have no idea.

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00:06:15.770 --> 00:06:22.369

P4: Yeah, usually, actually. Oh, and I think one thing is hmm, cause I realize this Edno system, right like,

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00:06:22.380 --> 00:06:26.819

P4: you can't really play video. You can... I think one of the questions that my son asked was

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00:06:26.980 --> 00:06:34.150

P4: like, Oh, can you play me a video of something. I can't remember what it was, but it couldn't, because, like, you can't link to a external site.

72

00:06:34.490 --> 00:06:41.219

P4: So I guess I mean, I can probably use this, like, as a starting point, like, if he has any questions, I can probably like, Okay, like, let's ask it. No.

73

00:06:41.260 --> 00:06:49.370

P4: But then, if he wants more information like, Oh, he wants to, because sometimes he likes like visual things. He wants to see a video. So he'll ask me, can I see a video of

74

00:06:49.460 --> 00:06:52.942

P4: this or that, you know. So I probably use it more of like,

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00:06:53.430 --> 00:07:02.960

P4: you know, like, how sometimes we use all Wikipedia as like a starting point, and then you branch off your research from there. Right? So I'll probably use Edno that way like more of like a starting point

76

00:07:03.150 --> 00:07:06.090

P4: and branch off to something else. After that.

77

00:07:06.430 --> 00:07:11.000

Muhammad Imran Bin Hassan: Yeah, and any other possible uses that you can think of.

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00:07:14.570 --> 00:07:18.849

P4: Not at the moment I mean, I use. I use. I use Chat GPT for work. But

79

00:07:18.940 --> 00:07:20.769

P4: yeah, I don't know. In the context of

80

00:07:22.920 --> 00:07:24.820

P4: my son's asking questions.

81

00:07:26.460 --> 00:07:29.399

P4: That's the only thing. Is there any other? No.

82

00:07:29.400 --> 00:07:32.559

Muhammad Imran Bin Hassan: As in, definitely. I have some ideas, you know.

83

00:07:32.560 --> 00:07:36.129

P4: Oh, really! Oh, it'll be interesting to hear this actually.

84

00:07:36.130 --> 00:07:38.271

Muhammad Imran Bin Hassan: Maybe, maybe after the interview.

85

00:07:38.700 --> 00:07:40.010

P4: Yeah, of course. Yeah, cause I mean.

86

00:07:40.010 --> 00:07:40.930

Muhammad Imran Bin Hassan: And.

87

00:07:41.410 --> 00:07:42.260

Muhammad Imran Bin Hassan: Okay.

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00:07:42.470 --> 00:07:44.580

P4: They still need things. I can think of.

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00:07:45.100 --> 00:07:45.830

P4: Right.

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00:07:46.210 --> 00:08:02.449

Muhammad Imran Bin Hassan: Okay. So that was the first part of the interview. Where I ask about how was the usage, your thoughts about that. So now the second part in the interview is about how chatbots are used for your child's learning, especially in school.

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00:08:03.250 --> 00:08:10.089

Muhammad Imran Bin Hassan: Okay? So my first question would be, right now your child is 5 years old, right?

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00:08:10.500 --> 00:08:10.910

P4: Yep.

93

00:08:10.910 --> 00:08:12.559

Muhammad Imran Bin Hassan: So he's in a preschool right?

94

00:08:12.740 --> 00:08:13.480

P4: Yes.

95

00:08:13.480 --> 00:08:17.019

Muhammad Imran Bin Hassan: Okay? So any thoughts about

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00:08:17.120 --> 00:08:20.509

Muhammad Imran Bin Hassan: your child's school using chatbots for learning.

97

00:08:21.540 --> 00:08:23.179

Muhammad Imran Bin Hassan: What? What are y'all....

98

00:08:24.240 --> 00:08:46.899

P4: I mean, I'm, I mean right now. They don't have any form of AI in their learning tools or whatever. But I mean, if let's say they decide to do it. I mean, I'm totally open to it. I think it's good to embrace, like, new technologies. As long as I feel like this like safeguards in place like, like, you know why I mentioned like oh, like, in case like the response becomes like

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00:08:46.900 --> 00:08:55.820

P4: sexual reproduction, which I think he is too young for at the moment. But yeah, I mean, I'm, I'm definitely open to AI in like classrooms.

100

00:08:56.080 --> 00:08:56.750

P4: Yeah.

101

00:08:57.080 --> 00:08:59.730

Muhammad Imran Bin Hassan: So that is from the perspective of the child.

102

00:09:00.735 --> 00:09:03.362

Muhammad Imran Bin Hassan: What about the school itself? Like

103

00:09:04.610 --> 00:09:12.720

Muhammad Imran Bin Hassan: for example, some schools... I don't know about your child school, some schools, the, the teachers, the staff. They are already using

104

00:09:13.356 --> 00:09:15.459

Muhammad Imran Bin Hassan: Generative AI chat bots.

105

00:09:15.980 --> 00:09:16.335

P4: Hmm.

106

00:09:16.690 --> 00:09:19.709

Muhammad Imran Bin Hassan: Right? So they are using it in different ways. So any, any thoughts about that?

107

00:09:20.120 --> 00:09:25.149

P4: No, at the moment. The teachers are not using that. As it is, they only just started.

108

00:09:25.260 --> 00:09:36.340

P4: I mean the school that my son is currently at like, they only just started like having the app to update like the parents with, like all the updates and all that. And they're still like figuring it out, so I think there's...

109

00:09:36.600 --> 00:09:39.739

P4: I don't know whether they will do AI anytime soon.

110

00:09:40.380 --> 00:09:44.440

Muhammad Imran Bin Hassan: School informed the parents that they are not using AI currently?

111

00:09:45.090 --> 00:10:01.200

P4: Yeah, I mean, when we had like when, when we first sat, that like when we were introduced to the school cause, my son only just joined his current school like at the beginning of this year. So they had. They sort of like have, like a parent principal teacher like meet up.

112

00:10:02.155 --> 00:10:07.469

P4: And they explain how, like, they do, like, the everyday like teaching and all that. And there's no AI tool.

113

00:10:07.470 --> 00:10:07.790

Muhammad Imran Bin Hassan: I think.

114

00:10:07.790 --> 00:10:08.320

P4: Yes.

115

00:10:08.710 --> 00:10:16.570

Muhammad Imran Bin Hassan: Okay. Do you know, if schools in Singapore are required to inform parents if they are using generative AI for

116

00:10:17.060 --> 00:10:23.520

Muhammad Imran Bin Hassan: various purposes. So, for example, the Ministry of Education. Recently, they

117

00:10:24.000 --> 00:10:27.840

Muhammad Imran Bin Hassan: released some guidelines to teachers if they want to use Generative AI

118

00:10:27.850 --> 00:10:36.249

Muhammad Imran Bin Hassan: for, say, setting exam questions for writing testimonials. Yeah, did you? Do you know if

119

00:10:36.530 --> 00:10:42.149

Muhammad Imran Bin Hassan: schools are required, and you know whether your answer is yes or no? What, what are your thoughts on that.

120

00:10:43.339 --> 00:10:51.140

P4: No, I mean, I don't know honestly, I feel like it's still a bit new. So I don't really know whether teachers or principals are required to ask for

121

00:10:51.400 --> 00:10:53.829

P4: permission, or even to notify parents.

122

00:10:53.910 --> 00:11:02.700

P4: But I would think that if if you want to integrate AI into like the learning tools and all that, or even to like, you know, like exam questions.

123

00:11:03.010 --> 00:11:05.899

P4: I feel like it's something that you, you need to inform

124

00:11:06.000 --> 00:11:06.980

P4: parents.

125

00:11:07.398 --> 00:11:18.121

P4: I mean just just to know. It's not, it's not, it's not like, Oh, you need to seek approval or consent, but I feel it's good, as a good, good to know. It's more of like a good to know.

126

00:11:19.000 --> 00:11:21.580

Muhammad Imran Bin Hassan: Why, why do you feel it's good for parents to know?

127

00:11:25.740 --> 00:11:28.800

P4: I don't know if I have like a concrete answer for this, because

128

00:11:28.850 --> 00:11:35.009

P4: I feel like I I feel like every time there's new technology. And it's still very new. There's always like this....

129

00:11:35.680 --> 00:11:44.312

P4: I don't know whether it's rational or irrational worry like it's gonna turn into something else like it's, it's not gonna be good for our kids, you know, something like that.

130

00:11:44.750 --> 00:11:49.549

P4: So I don't really have, like, a concrete answer for that. But I think it's more of like just a general worry that

131

00:11:50.020 --> 00:12:03.260

P4: you know, like, oh, they're gonna like, set questions or get our kids to use it, and then like with like, with free rein, without any like supervision, and things like that. So at least, if you are aware that oh, they're using the idea. At least

132

00:12:03.290 --> 00:12:04.829

P4: you know, if there's any like,

133

00:12:05.330 --> 00:12:10.330

P4: like you look at the question, and then you realize something, and then you can like, bring it up to the teacher, or

134

00:12:10.350 --> 00:12:13.819

P4: you need to make sure that when your kid uses the AI in school like,

135

00:12:14.950 --> 00:12:16.330

P4: like they use it

136

00:12:16.450 --> 00:12:20.950

P4: with caution. I, I don't know if that makes sense. I don't know how to articulate that point.

137

00:12:21.890 --> 00:12:24.480

Muhammad Imran Bin Hassan: Yeah, it's, it's okay. I think I understand.

138

00:12:24.480 --> 00:12:24.990

P4: Yeah.

139

00:12:25.340 --> 00:12:33.740

Muhammad Imran Bin Hassan: Okay, so this is the, this is the last main question. So it is. This question is not just about current

140

00:12:34.237 --> 00:12:43.900

Muhammad Imran Bin Hassan: right now, but also, possibly the future. So I just wanna get your perspective about how you think this type of technology will have an impact

141

00:12:44.030 --> 00:12:45.600

Muhammad Imran Bin Hassan: on your child's learning.

142

00:12:48.390 --> 00:12:50.440

P4: I feel that is good, I mean,

143

00:12:51.500 --> 00:13:09.989

P4: like, honestly, I, I don't know how like, you know, people like the, the, the people before us. How they did their research like for us that you know, we have Google, like, how did it? I don't know how like people before us did their research, their learning like, now, we're so like, you know, growing up, we were so used to like using Google using Wikipedia. So I feel like,

144

00:13:10.060 --> 00:13:12.949

P4: that it will always be a good thing. Right?

145

00:13:13.620 --> 00:13:14.740

P4: It's just that...

146

00:13:15.080 --> 00:13:24.739

P4: I, I like... I, I keep mentioning that I think the only concern is that oh, making sure there's safeguards, solutions, like, you know, like, it doesn't turn into something bad.

147

00:13:25.490 --> 00:13:33.180

P4: So yeah, I feel like in the future, I'd be happy for my son to use AI in school in his, in his classes.

148

00:13:33.791 --> 00:13:43.820

P4: Yeah. And I think it's useful for someone like him, cause he's...he... like I said, he always asked a lot of questions which I don't know the answers to, honestly. Like something he asked. Things like

149

00:13:44.130 --> 00:13:45.959

P4: which are like, science-based

150

00:13:45.980 --> 00:13:49.710

P4: or maths-based, and I'm not good at it, so I feel like it's a good resource for him

151

00:13:49.770 --> 00:13:51.300

P4: like in the future, even.

152

00:13:52.210 --> 00:13:52.770

Muhammad Imran Bin Hassan: Hmm.

153

00:13:53.040 --> 00:13:53.750

Muhammad Imran Bin Hassan: yeah.

154

00:13:53.990 --> 00:13:54.680

Muhammad Imran Bin Hassan: Right?

155

00:13:56.417 --> 00:14:02.369

Muhammad Imran Bin Hassan: Okay. I think that that is the end of the main interview. Let me just stop the recording.

156

00:14:02.550 --> 00:14:03.250

P4: But okay.

Appendix D – Interview Transcripts: P5

1

00:00:04.920 --> 00:00:13.849

Muhammad Imran Bin Hassan: Okay, thanks for joining me. So firstly, can you share generally how you use the Generative AI chatbot alongside your child?

2

00:00:14.790 --> 00:00:35.830

P5: Okay. So my child has actually been playing with Siri on the phone quite a bit. So the Generative AI bot was quite intuitive for them but because they've had prior experience with Siri. That was done sort of like, recreationally or informally. So it sort of primed them into how they would like to use the AI.

3

00:00:35.930 --> 00:00:38.921

P5: So with Siri, they actually...

4

00:00:39.580 --> 00:00:49.129

P5: with AI and other forms of like, Siri and other forms of AI, they would generally don't really have much of an agenda, and they just want to test out the capacity of

5

00:00:49.876 --> 00:00:50.910

P5: the tool.

6

00:00:51.140 --> 00:00:57.760

P5: So, for example, with Siri, they often ask you to show them pictures of certain things they're interested in.

7

00:00:57.930 --> 00:01:09.159

P5: But with this particular tool it didn't, it couldn't show pictures. So I think that showed me that they were actually just exploring the technology and didn't really much have...and it didn't have much of an agenda.

8

00:01:10.590 --> 00:01:17.500

Muhammad Imran Bin Hassan: So you were saying that when they were using Siri, it was more for recreational intents, and purposes.

9

00:01:17.500 --> 00:01:18.190

P5: Uh hmm.

10

00:01:18.964 --> 00:01:26.416

Muhammad Imran Bin Hassan: Did you give suggestions, or maybe encourage them to use it in different ways? And if so...

11

00:01:26.830 --> 00:01:37.050

P5: Yes, I did so. I wanted to sort of steer them to more productive outputs. So I, when they were using it, I said Oh, how about...you look for ways to help you

12

00:01:37.080 --> 00:01:40.940

P5: do things better, or why don't you find out more about certain things?

13

00:01:41.421 --> 00:01:45.510

P5: So some of my suggestions took off, and I did ask

14

00:01:45.540 --> 00:02:11.970

P5: one or 2 questions about... I think if I'm not wrong, nature or the environment but once they were done, they were back to the usual like, Oh, pokemon! And whatever... so... and there was some prompts that I suggested that totally didn't interest them. For example, "How can you ask us, the AI to teach you how to learn better or pay attention in class?" And these were things that didn't interest them. And so they didn't even want to like give the prompt.

15

00:02:14.210 --> 00:02:18.059

Muhammad Imran Bin Hassan: Okay, thanks for... thanks for that. Next main question.

16

00:02:18.665 --> 00:02:19.999

Muhammad Imran Bin Hassan: Now looking back...

17

00:02:20.230 --> 00:02:26.830

Muhammad Imran Bin Hassan: in retrospect. How use...excuse me, how useful did you find the Generative AI chatbot to be.

18

00:02:28.310 --> 00:02:32.029

P5: Hmm. I thought that in terms of...

19

00:02:32.350 --> 00:02:34.060

P5: the language...

20

00:02:34.440 --> 00:02:57.039

P5: per se, that is actually more useful. So I mean, there are many options out there, but this one being tailored to children the way it put out the explanation was actually more accessible to children, so I thought that was good. If there was like a piece of homework, for example, that they need to work on. You know, a little bit more constructive but as a parent. I'm still a little bit cautious

21

00:02:57.120 --> 00:03:10.280

P5: about teaching them use... to use AI to do work and do.. do research. I think...even though I think, largely, because of their age. So they're younger.

22

00:03:10.290 --> 00:03:11.310

P5: And because the..

23

00:03:11.330 --> 00:03:13.230

P5: type of research tasks...

24

00:03:13.290 --> 00:03:16.030

P5: that they have been asked to do usually are very factual.

25

00:03:16.090 --> 00:03:20.752

P5: So with AI is too efficient, and it doesn't

26

00:03:22.030 --> 00:03:22.920

P5: sort of...

27

00:03:23.380 --> 00:03:42.709

P5: address, the need to go through the process of the research. So I think even though it's more efficient. And we... I would teach, like an older child to use it. But for the younger child, I feel like they might still need to go through the motions of you know... maybe looking up the dictionary or flipping books, or just, you know, engaging with the material...

28

00:03:42.800 --> 00:03:43.979

P5: at greater length.

29

00:03:46.050 --> 00:03:51.130

Muhammad Imran Bin Hassan: Okay. So you're saying that you are bit cautious when it comes to using it for learning.

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00:03:51.788 --> 00:03:56.499

Muhammad Imran Bin Hassan: So how do you...Okay, so let me... let me think for a while here.

31

00:04:05.670 --> 00:04:15.549

Muhammad Imran Bin Hassan: Okay, right. So on one hand, you are not completely opposed to them using it. Perhaps you're just cautious when it comes to certain...

32

00:04:15.640 --> 00:04:18.260

Muhammad Imran Bin Hassan: certain ways of using the chatbot.

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00:04:18.789 --> 00:04:19.319

P5: Right.

34

00:04:19.320 --> 00:04:24.840

Muhammad Imran Bin Hassan: So how do you think this will develop in...over time?

35

00:04:26.350 --> 00:04:30.839

P5: So the time of like, my exposure to AI or the child's age?

36

00:04:34.194 --> 00:04:36.679

Muhammad Imran Bin Hassan: However you choose to interpret that.

37

00:04:37.000 --> 00:04:38.589

P5: Okay, I think first...

38

00:04:39.550 --> 00:04:43.489

P5: I think for me, I don't believe in giving children quick answers.

39

00:04:43.610 --> 00:04:45.520

P5: So sometimes I do want to

40

00:04:45.550 --> 00:04:58.870

P5: like, ask them to think about the process, think, why infer, and things like that. So if they like, fall back on AI too easily, I feel that they lose the opportunity to develop their own thinking

41

00:05:00.130 --> 00:05:02.809

P5: and their own sort of observational skills.

42

00:05:02.930 --> 00:05:05.828

P5: So I think that's something that I'm cautious about

43

00:05:06.530 --> 00:05:10.740

P5: and especially this, some. This is like the stage of development where

44

00:05:10.800 --> 00:05:14.479

P5: these like structures, you know, and thought processes

45

00:05:14.600 --> 00:05:15.980

P5: are part of, you know...

46

00:05:16.310 --> 00:05:23.129

P5: essential to... to their cognitive development. So I'm a bit cautious of that. As time goes by, perhaps...

47

00:05:23.358 --> 00:05:27.510

P5: when pressed for time. For example, I mean, there's a lot of work to do, and I need to

48

00:05:27.670 --> 00:05:36.540

P5: get them the answer very efficiently, or perhaps some of it is not. Sometimes, you know, there are other concerns, say, for example, they're badgering me with...

49

00:05:36.560 --> 00:05:41.510

P5: Why is this? Why is the sky blue and all that, and I'm not particularly like sort of...

50

00:05:41.710 --> 00:05:45.450

P5: invested, you know, at that moment to go through the

51

00:05:45.490 --> 00:05:56.230

P5: the cognitive process with them, I might say, Okay, why don't you ask Siri? And you know, find your own answers? So I think it depends really on the agenda and the, the task at hand.

52

00:05:58.490 --> 00:06:08.109

Muhammad Imran Bin Hassan: Right. So what's the criteria for you to decide that they are ready? Is it simply a certain cutoff age to use it in a certain way?

53

00:06:08.230 --> 00:06:11.740

Muhammad Imran Bin Hassan: Or are there other things that you think are necessary?

54

00:06:13.620 --> 00:06:17.940

P5: I think I think with learning right, it comes in like a flux.

55

00:06:18.310 --> 00:06:20.350

P5: So, for example, I think with...

56

00:06:20.390 --> 00:06:27.619

P5: at this... I, I feel at this age, I want to train them in terms of like, cognitive development, right? Observation, inference...

57

00:06:27.800 --> 00:06:37.829

P5: 2 examples I raised earlier. So this will be the point, but when they're older they will still need to infer and observe. But the level and the difficulty of

58

00:06:38.050 --> 00:06:39.590

P5: the task would increase,

59

00:06:39.710 --> 00:06:45.879

P5: right? So, for example, when they're very young now, they will ask me question: "Oh, why? Why do you need traffic lights?"

60

00:06:45.950 --> 00:06:49.880

P5: you know? Why is the bus so big. And some of these questions, you know, with

61

00:06:50.630 --> 00:07:01.300

P5: with a little bit of thought, they could have actually derived the answer on their own. So I think if I feel that you know this is a difficulty, the, the answer can be obtained

62

00:07:02.060 --> 00:07:11.689

P5: within their like reasonable, like age limit. I would ask them to think on their own. And if it's beyond their ability or there's, I feel like there's no contextual clues. Or...

63

00:07:11.700 --> 00:07:14.949

P5: then I might direct them to the AI.

64

00:07:16.700 --> 00:07:18.459

Muhammad Imran Bin Hassan: Right, so...

65

00:07:18.700 --> 00:07:30.160

Muhammad Imran Bin Hassan: it sounds to me, it sounds like it's, it's a developmental process where you are exposing them, you are coaching them in terms of cognitive processes.

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00:07:30.270 --> 00:07:36.550

Muhammad Imran Bin Hassan: So that probably comes from you. Are there any stakeholders which you think can be pulled in...

67

00:07:37.244 --> 00:07:39.379

Muhammad Imran Bin Hassan: to aid this development?

68

00:07:39.773 --> 00:07:41.879

Muhammad Imran Bin Hassan: Who are they? And what can they do?

69

00:07:43.497 --> 00:07:49.210

P5: Well, I think it's mostly parents, to some extent teachers but I can't really

70

00:07:49.430 --> 00:07:59.930

P5: monitor what goes on the classroom. And I'm sure you know the teachers have their own like training and agenda, so I mean we'll leave it to, to them, to...

71

00:08:00.360 --> 00:08:04.270

P5: you know. Be the sub to the... be the expert in whatever they're doing.

72

00:08:04.980 --> 00:08:07.099

P5: So I think, as far as I'm concerned.

73

00:08:07.701 --> 00:08:10.590

P5: That's just... I just control what's within my realm

74

00:08:11.450 --> 00:08:12.170

P5: of info.

75

00:08:12.170 --> 00:08:19.069

Muhammad Imran Bin Hassan: Okay? So, so you see that there is a separation between what's happening in school versus what's happening at home.

76

00:08:19.410 --> 00:08:20.140

Muhammad Imran Bin Hassan: So you know...

77

00:08:20.140 --> 00:08:20.700

P5: Yeah.

78

00:08:20.700 --> 00:08:24.610

Muhammad Imran Bin Hassan: There is an interweaving of the learning that goes on.

79

00:08:25.410 --> 00:08:30.020

P5: No, not not really. I don't really see what's going on in the classroom. To be honest, not for my children.

80

00:08:32.169 --> 00:08:37.949

Muhammad Imran Bin Hassan: Do, do you? I mean, this is in regard to using AI for learning.

81

00:08:38.159 --> 00:08:48.030

Muhammad Imran Bin Hassan: So I'm not sure whether it's happening yet. So maybe a first question would be, do you know whether it is being used in the learning for your child? This is the...

82

00:08:48.634 --> 00:08:50.279

Muhammad Imran Bin Hassan: is your child 7 or 6?

83

00:08:50.760 --> 00:08:51.860

P5: 7, 7, right.

84

00:08:52.240 --> 00:08:55.259

Muhammad Imran Bin Hassan: So this is in regard to the 7 year old child.

85

00:08:55.260 --> 00:08:55.600

P5: Oh...

86

00:08:55.600 --> 00:08:56.719

P5: I don't think so.

87

00:08:58.200 --> 00:09:03.059

Muhammad Imran Bin Hassan: Uhhuh. So since we're talking about learning in the classroom.

88

00:09:03.841 --> 00:09:06.499

Muhammad Imran Bin Hassan: You probably already know that

89

00:09:06.620 --> 00:09:09.340

Muhammad Imran Bin Hassan: teachers have been given the green light

90

00:09:09.440 --> 00:09:13.169

Muhammad Imran Bin Hassan: by the Ministry of Education to use AI

91

00:09:13.580 --> 00:09:16.240

Muhammad Imran Bin Hassan: while not necessarily directly with children, but.

92

00:09:16.700 --> 00:09:19.970

Muhammad Imran Bin Hassan: You know, in the bigger scope of teaching and learning.

93

00:09:19.970 --> 00:09:20.620

P5: Yes.

94

00:09:20.620 --> 00:09:24.489

Muhammad Imran Bin Hassan: So you are aware of this. And what are your thoughts about this

95

00:09:24.670 --> 00:09:26.329

Muhammad Imran Bin Hassan: when it comes to...

96

00:09:26.980 --> 00:09:30.210

Muhammad Imran Bin Hassan: So sorry, when it comes to your involvement?

97

00:09:30.740 --> 00:09:48.600

P5: Okay? So I think I answer, the first part of your question first, do I think my 7 year old is being coached on AI. Not yet, because the, the last computer lesson they had was touch typing, the first one was entering your password. The second one was touch typing. So I think they are still way too young, and the teacher has not reached that point yet.

98

00:09:49.740 --> 00:09:57.270

P5: Let's say, I think that almost every other child these days has, like, some kind of like, AI enabled tool at home.

99

00:09:57.786 --> 00:10:06.579

P5: So I think many... prior to this, even in preschool my kids have access to Tian Mao Jing Ling is a China Ali...

100

00:10:07.210 --> 00:10:08.869

P5: Ali ex... Ali...

101

00:10:10.440 --> 00:10:12.767

P5: Alibaba. Is it? Is that a company?

102

00:10:13.240 --> 00:10:18.669

P5: the Taobao company, the, the AI. And I just bought one of their speakers

103

00:10:18.690 --> 00:10:25.239

P5: so they can request for songs, and you know, weather and things like that. So I think there was um...

104

00:10:25.380 --> 00:10:41.840

P5: my exposure to language learning through AI, so that one, some of it's incorporated at home. I'm sure other people have Alexa and other things. So that's the first part of your question. A second part of my question is that... of your questions. As educator... I've been given a green light to use AI in the classroom, and I think...

105

00:10:42.090 --> 00:10:43.570

P5: I have used it.

106

00:10:43.580 --> 00:10:47.944

P5: And in fact, when I tell the students like, Oh, this is very straightforward. That's just Chat GPT.

107

00:10:48.990 --> 00:10:57.530

P5: and the, the students are surprised that... "you mean you can?" and I teach them the prompt like... Oh, you can tell the AI to stop yapping. So which is...

108

00:10:58.120 --> 00:11:08.979

P5: and it actually responds to Gen Z lingo like, stop yapping, and it will give you a concise version and the students are like amused by it. They will use it. And some of the older kids I've seen

109

00:11:09.100 --> 00:11:10.990

P5: have put in, "Make it simple."

110

00:11:11.230 --> 00:11:36.905

P5: And then, of course, their, their agenda is to like, outsmart the teacher by saying that. "Oh, you know, if you use all this fancy vocabulary, the teacher will know you didn't do it", so you have to... They coach AI to like, simplify the answer so that it will seem like it's student generated work. So I think all of that is something that we need to keep in our stride. But as a teacher I feel like, the challenge is then to make the task more demanding or more challenging. So personally,

111

00:11:38.280 --> 00:11:43.029

P5: I would actually think about AI, but like, when I said AI related tasks, I would actually

112

00:11:43.960 --> 00:11:49.439

P5: set some portions or some aspects of it which AI cannot provide the answer for.

113

00:11:49.550 --> 00:11:54.229

P5: So there will be some part that's basic. So, so this is what I will do to sort of

114

00:11:54.480 --> 00:11:56.840

P5: work with AI, yeah.

115

00:11:58.220 --> 00:12:09.119

Muhammad Imran Bin Hassan: Right. So your perspective is quite unique because you are a teacher as well. But let's say we step into the shoes of you as a parent, primarily, right? So let's say...

116

00:12:09.767 --> 00:12:19.749

Muhammad Imran Bin Hassan: let's say you either know, or you don't know, or you're wondering right, at the back of your head. You know that your child's teacher is allowed to use Generative AI.

117

00:12:20.545 --> 00:12:21.320

Muhammad Imran Bin Hassan: Perhaps...

118

00:12:21.410 --> 00:12:28.819

Muhammad Imran Bin Hassan: they might be using it for certain purposes. So what are your... Do you have any thoughts about that? Any concerns, any worries?

119

00:12:28.820 --> 00:12:29.939

P5: I think you've really....

120

00:12:30.300 --> 00:12:30.659

Muhammad Imran Bin Hassan: The...

121

00:12:31.220 --> 00:12:32.700

P5: Depends on the, the,

122

00:12:32.880 --> 00:12:34.820

P5: the expertise of the teacher.

123

00:12:34.910 --> 00:12:37.510

P5: So now there are some, like, AI to help.

124

00:12:37.590 --> 00:12:40.090

P5: I know that on SLS, as a new feature,

125

00:12:40.200 --> 00:12:43.470

P5: that is like automated marking for math.

126

00:12:43.960 --> 00:12:53.729

P5: So after the teachers put in the answers it will generate certain patterns and all that, and I think that that's very productive. If the teacher is a skilled user, you can

127

00:12:54.000 --> 00:13:09.579

P5: like, send out targeted practices for the kids. That's, I mean, if the teacher is using that, I'll be very pleased if the teacher is doing that. But if I mean in the hands of a less skilled teacher... I think there are still many teachers who

128

00:13:10.100 --> 00:13:13.449

P5: don't have faith or are...

129

00:13:13.570 --> 00:13:24.387

P5: have not quite caught up with using AI, so they will actually set boundaries and limits on students like, oh, you're not allowed to do this, or you have to use certain tools. And I think that...

130

00:13:24.800 --> 00:13:31.669

P5: some, I think it depends on how old a kid is. For my child, who's in primary one, I will be willing to go with the teacher.

131

00:13:32.130 --> 00:13:43.549

P5: Because, like I said earlier on, you know. Sometimes the teacher require them to just flip the book, you know, be familiar with the material, and that might be the teacher's, like, second, like, you know, part of the teacher's agenda. So I think I will be

132

00:13:43.990 --> 00:13:45.800

P5: fairly supportive, I think.

133

00:13:46.130 --> 00:13:49.720

P5: Even if the teacher doesn't use AI or uses in a, like a,

134

00:13:49.790 --> 00:13:51.770

P5: in a counterintuitive way.

135

00:13:54.680 --> 00:14:03.240

Muhammad Imran Bin Hassan: Okay. So earlier on, you said that you were not aware what's happening in your child's classroom when it comes to the use of technology.

136

00:14:03.760 --> 00:14:13.750

Muhammad Imran Bin Hassan: Alright! So what would you like to know more? Not just about technology in general, but about the use of generative AI in your child's learning. So again, from the perspective of a parent.

137

00:14:20.760 --> 00:14:33.360

P5: Well, I know that the teachers, at least as far as the Primary One is concerned, my Primary One child is concerned... The teachers does some... issue some SLS lesson, and that kind of thing.

138

00:14:34.660 --> 00:14:39.259

P5: I think what I would.... I'm concerned about is the degree of

139

00:14:39.400 --> 00:14:41.360

P5: parental involvement

140

00:14:41.530 --> 00:14:58.940

P5: teachers expect on these HBL days. So when I look at some of the responses and the expectations, it... it's almost as if the teacher is expecting an adult to sit beside the child, to read all the instructions for the child, and to like, do the typing for the child, which I think

141

00:14:59.560 --> 00:15:02.109

P5: really defeats the purpose of

142

00:15:02.320 --> 00:15:03.980

P5: self-directed learning.

143

00:15:04.160 --> 00:15:13.599

P5: So to me, that's a question mark on how the technology is used. On the other hand, later on, let's say, for example, my child puts in some responses.

144

00:15:14.040 --> 00:15:16.669

P5: I don't actually see the teacher feedback

145

00:15:16.990 --> 00:15:18.160

P5: on SLS.

146

00:15:19.095 --> 00:15:35.319

P5: So with worksheets and things like that, I get to see the teachers mark it. Things are correct or wrong but with SLS, I...it's a kind of like, a black hole for the parents, and also I don't get any feedback on, let's say, for example, the teacher says, practise this, this, this. I don't know if these, like,

147

00:15:36.220 --> 00:15:44.239

P5: practices, whether my child has gotten it correct. If there's anything I need to follow up on, and etc. So I think in terms of feedback

148

00:15:44.440 --> 00:15:45.120

P5: loop...

149

00:15:47.012 --> 00:15:53.339

P5: The hard copy traditional is more complete versus the electronic ones at the moment.

150

00:15:54.090 --> 00:15:59.950

Muhammad Imran Bin Hassan: Right. So, so earlier on, you mentioned a very specific tool that the Chinese language teacher is using

151

00:16:01.420 --> 00:16:11.860

Muhammad Imran Bin Hassan: and you, you said that that is a form of Generative AI. So what would you like to know more about that tool that your child's Chinese teacher is using?

152

00:16:13.910 --> 00:16:15.109

P5: I don't think I...

153

00:16:15.110 --> 00:16:21.224

Muhammad Imran Bin Hassan: Sorry. Sorry. Can I? Can I rephrase it? Not...not know more about the tool, but maybe about...

154

00:16:21.710 --> 00:16:30.239

Muhammad Imran Bin Hassan: For example, how the teacher uses the tool. And just a minute ago you mentioned about feedback is... is that something that you're wondering about

155

00:16:30.310 --> 00:16:32.720

Muhammad Imran Bin Hassan: when it comes to your child using the tool.

156

00:16:33.300 --> 00:16:35.120

P5: Hmm! I think that's...

157

00:16:37.300 --> 00:16:40.369

P5: I think, as a parent I feel that

158

00:16:40.700 --> 00:16:42.180

P5: as of now...

159

00:16:43.070 --> 00:16:44.470

P5: E-pedagogy...

160

00:16:44.820 --> 00:16:46.349

P5: from what I observe..

161

00:16:46.780 --> 00:16:47.820

P5: is...

162

00:16:49.940 --> 00:16:50.990

P5: it's...

163

00:16:52.270 --> 00:16:57.609

P5: there's really no comms with the parents on what happens on the... on the E-Ped.

164

00:16:58.630 --> 00:17:00.740

P5: Yeah. So I think for that...

165

00:17:01.040 --> 00:17:08.629

P5: you know, I would love to be able to see sort of like a progress report, that sort of things, you know, like, yeah.

166

00:17:09.050 --> 00:17:10.069

P5: so...

167

00:17:11.020 --> 00:17:21.799

P5: or you know, or some, I... I wish the AI can consolidate the data and send it out to parents individually. Yeah. So that's what I hope to receive as a parent.

168

00:17:22.710 --> 00:17:26.319

Muhammad Imran Bin Hassan: What? What kind of data? Like, how the child

169

00:17:26.369 --> 00:17:28.669

Muhammad Imran Bin Hassan: is learning, using, using the tool.

170

00:17:28.670 --> 00:17:30.369

P5: Yeah. So, say, for example,

171

00:17:30.720 --> 00:17:41.469

P5: a typical SLS has like exercises, right? Fill in the blanks or something like that. So this the child puts it in. But I would like to know, say, for example...

172

00:17:43.260 --> 00:17:43.960

P5: what

173

00:17:44.380 --> 00:17:46.419

P5: a good answer is like,

174

00:17:46.460 --> 00:17:48.330

P5: what a weak answer is like.

175

00:17:49.920 --> 00:17:58.330

P5: Perhaps if let's say, if it's a unit where your child is particularly weak at subtraction of double digits.

176

00:17:58.340 --> 00:17:59.810

P5: you know, then

177

00:17:59.880 --> 00:18:03.399

P5: you know, the data can see, like, okay... relative to your peers,

178

00:18:03.570 --> 00:18:18.045

P5: you know. Your child is very weak at, you know, multiplication or certain like topics. So I think that that will help me as a parent to focus my energy on, you know, remediating gaps, you know, rather than just...

179

00:18:19.760 --> 00:18:22.010

P5: yeah, I think that will supplement the hard copy.

180

00:18:23.350 --> 00:18:28.009

Muhammad Imran Bin Hassan: Okay, now, let's zoom out for a moment, and I'm talking in terms of time.

181

00:18:28.767 --> 00:18:33.071

Muhammad Imran Bin Hassan: Let's look 1, 2, 5, 10 years in the future. And

182

00:18:33.460 --> 00:18:41.089

Muhammad Imran Bin Hassan: consider Generative AI. So how do you think this kind of technology will have an impact on your child's learning?

183

00:18:42.560 --> 00:18:43.550

P5: Hmm.

184

00:18:44.000 --> 00:18:49.110

Muhammad Imran Bin Hassan: So the, the timeframe can be as long or as wide as you want. It's, it's up to you.

185

00:18:50.320 --> 00:18:53.660

P5: I feel like Generative AI

186

00:18:53.980 --> 00:18:56.090

P5: breeds a certain

187

00:18:58.230 --> 00:18:58.985

P5: laziness

188

00:18:59.930 --> 00:19:01.310

P5: like I said.

189

00:19:01.430 --> 00:19:04.439

P5: So this is me speaking as an adult who has...

190

00:19:04.650 --> 00:19:08.499

P5: who uses Generative AI, I think it becomes like a crutch.

191

00:19:10.080 --> 00:19:11.790

P5: and as much as we've...

192

00:19:12.490 --> 00:19:16.259

P5: we need to learn how to like, analyze the data and things like that.

193

00:19:16.290 --> 00:19:19.199

P5: It, although it speeds things up, it also

194

00:19:19.370 --> 00:19:22.319

P5: in a way, limits creativity

195

00:19:24.230 --> 00:19:27.548

P5: to a certain extent, like, so I say, for example,

196

00:19:29.020 --> 00:19:29.800

P5: yeah.

197

00:19:30.310 --> 00:19:33.760

P5: So I feel that in terms of learning, it

198

00:19:34.190 --> 00:19:38.319

P5: can go both ways. Either the child is

199

00:19:39.822 --> 00:19:47.010

P5: less confident in being independently like, generating ideas without the help of technology.

200

00:19:47.140 --> 00:19:48.030

P5: Er...

201

00:19:48.170 --> 00:20:00.230

P5: alternatively, the learning demands would be so difficult that, you know, you know, in the past we used to be able to get past education system just by memorizing and regurgitation, right? We hated it.

202

00:20:00.580 --> 00:20:13.140

P5: Looking back is so much easier than saying, now the children are expected to generate and infer so, which is good like it's more like a higher order, but is more challenging as well. So with Generative AI...

203

00:20:13.850 --> 00:20:21.400

P5: the natural development is that it requires gen... like at a higher, the highest level is originality and creativity.

204

00:20:21.480 --> 00:20:45.990

P5: So how can you outgenerate AI that has access to so much information? And you know, would it be a situation where we feel like there's nothing new under the sun, because Generative AI is able to scour every single bit of information on the Internet in different languages, such that you will never be able to outdo technology. So I feel like, that's the worry I have as a parent.

205

00:20:48.390 --> 00:20:51.390

Muhammad Imran Bin Hassan: Okay, thanks, final main question.

206

00:20:51.560 --> 00:21:07.599

Muhammad Imran Bin Hassan: So now it's back into the home. Right. So... and it doesn't have to be the tool that you use, it could be any Generative AI tool. Okay? So how do you think your family might integrate the use of such Generative AI Chatbots into your lives?

207

00:21:10.370 --> 00:21:17.660

P5: I am quite technology-resistant, actually, at home. Like, I don't use Internet of Things very much

208

00:21:17.710 --> 00:21:22.549

P5: at home. Because I'm old fashioned like that. I know. I think that

209

00:21:22.890 --> 00:21:25.870

P5: dolls last longer than remotes, and

210

00:21:26.000 --> 00:21:34.317

P5: when you have a lot of fiddly electronics, these things will break down easily. So I'm old school like that. But recently I came across this

211

00:21:34.770 --> 00:21:37.680

P5: person who uses Generative AI to

212

00:21:37.840 --> 00:21:39.559

P5: hone her child's

213

00:21:39.590 --> 00:21:41.560

P5: self-directed

214

00:21:41.730 --> 00:21:47.560

P5: motivation. So, she... so this, this parent, this is person is like a ADHD coach.

215

00:21:47.670 --> 00:21:51.310

P5: So she uses Alexa to

216

00:21:51.530 --> 00:21:53.839

P5: coach her son to set timers for himself.

217

00:21:54.340 --> 00:22:03.345

P5: So she uses AI to... for life skills. So she will say, like, you know: "Now, set a 20 min timer for me to do this", you know. "AI remind me to

218

00:22:03.680 --> 00:22:07.769

P5: do this in 20 min", or "give me a 5 min pre-warning". So this...

219

00:22:08.000 --> 00:22:12.320

P5: it's sort of like, a easy way to help her ADHD child to structure and

220

00:22:12.360 --> 00:22:18.010

P5: and self-manage. So I thought that was interesting, and that's at the back of my mind. I'm wondering whether I should

221

00:22:18.310 --> 00:22:21.560

P5: yield and bring in...

222

00:22:22.150 --> 00:22:28.521

P5: you know, gener... like technology, AI, you know, and some of these devices into my home so that we can

223

00:22:28.920 --> 00:22:32.279

P5: work towards self-management and improve self-management.

224

00:22:33.500 --> 00:22:37.309

Muhammad Imran Bin Hassan: What about other domains which are not

225

00:22:37.360 --> 00:22:38.510

Muhammad Imran Bin Hassan: academic?

226

00:22:39.634 --> 00:22:42.059

Muhammad Imran Bin Hassan: What about family or something else?

227

00:22:42.500 --> 00:22:44.469

Muhammad Imran Bin Hassan: Any ways, you can think of?

228

00:22:47.520 --> 00:22:48.900

P5: Not, not particularly.

229

00:22:51.640 --> 00:22:53.550

P5: Yeah. Sorry I am...

230

00:22:53.970 --> 00:22:57.799

P5: I'm of the belief that we should try and reduce the use of technology.

231

00:22:59.096 --> 00:23:00.349

P5: Okay, yeah.

232

00:23:00.350 --> 00:23:04.680

Muhammad Imran Bin Hassan: I, I mean, I I understand. Different families who have different beliefs.

233

00:23:04.680 --> 00:23:05.105

P5: Yes.

234

00:23:05.530 --> 00:23:08.019

Muhammad Imran Bin Hassan: So ,thank you so much. I'm gonna stop recording.

235

00:23:08.020 --> 00:23:08.940

P5: Yeah. Welcome.

Appendix D – Interview Transcripts: P8

1

00:00:03.340 --> 00:00:07.640

Muhammad Imran Bin Hassan: Okay. So thanks for joining. So I will start with the question

2

00:00:07.969 --> 00:00:20.999

Muhammad Imran Bin Hassan: how.... Oh, sorry. Before I start the question, I also wanna say at any point of time, because chances are, you have the screenshots or the images on your phone or somewhere else? Right? So if you wanna like, refer to those you can.

3

00:00:21.590 --> 00:00:26.070

Muhammad Imran Bin Hassan: You know, or you wanna point out specific ones. You, you also can. Okay.

4

00:00:26.220 --> 00:00:29.710

Muhammad Imran Bin Hassan: So my first question is, can you share...

5

00:00:30.220 --> 00:00:33.470

Muhammad Imran Bin Hassan: how generally, how you had used the

6

00:00:33.620 --> 00:00:36.290

Muhammad Imran Bin Hassan: GAI chatbot alongside your child.

7

00:00:37.190 --> 00:00:43.650

P8: Ok. So it began with simple question and answer, where you know

8

00:00:43.990 --> 00:00:52.920

P8: my son wants to know more about something, and because his interest lies in like scientific facts. So he asks questions like...

9

00:00:53.440 --> 00:00:54.459

P8: What's the

10

00:00:54.470 --> 00:01:08.249

P8: you know? The, the worst natural disaster, what's the biggest volcanic eruption in the world, and I think it progressed from there to other things. I think one of the things that my son enjoys riddles.

11

00:01:08.310 --> 00:01:21.360

P8: So he did. This is something I sent to you. I think this is something that my, my wife actually recorded separately. So he asked the AI riddles, and then the AI asked him riddles.

12

00:01:21.480 --> 00:01:26.029

P8: And then they, they got to the point of wanting to play with the AI.

13

00:01:26.330 --> 00:01:33.270

P8: So in that sense that they were, they were really having like they tried to do a 21 questions thing.

14

00:01:33.330 --> 00:01:40.029

P8: where? Questions? Where? I had to ask questions. Guess what is it? What is [*P8's child's name*] supposed to be right?

15

00:01:40.040 --> 00:01:46.730

P8: Yeah. It turns out that yeah, it's really bad at it. So yeah, I couldn't guess at all. And

16

00:01:47.251 --> 00:02:06.369

P8: and [*P8's spouse*] also wanted to see whether the AI could become like a, like a friend, like a playmate for my son. And so she approached it from that, you know, from, from the idea that if I don't have a friend, so I need someone to, to talk to. Can I talk to the AI, and can I have like intelligible answers? Can I have a conversation.

17

00:02:06.560 --> 00:02:11.650

P8: And what she found out was that it wasn't the best lah. Honestly. So it was.

18

00:02:11.710 --> 00:02:20.039

P8: There were some gaps in what the AI could do, and basically treating it like another person is...

19

00:02:20.210 --> 00:02:22.570

P8: I think it's beyond what you can do. So...

20

00:02:22.901 --> 00:02:28.200

P8: but I think facts, factually getting answers back was good, I think, though the other thing that

21

00:02:28.360 --> 00:02:34.379

P8: I wanted to comment on was that the AI was not very good in catching

22

00:02:34.390 --> 00:02:36.370

P8: some of the words

23

00:02:36.380 --> 00:02:52.390

P8: that my son would say, and sometimes they transliterate, or they transcribe completely the, the wrong word. And, but the good thing I think he does manage to catch what he's trying to say, and it does give intelligible answers.

24

00:02:52.400 --> 00:02:59.510

P8: So that's also one of the good and bad things you want to comment on the UI. I feel that

25

00:03:01.360 --> 00:03:12.800

P8: it's not, It's like you have to listen to the entire thing. So if you ask something complex, and the AI is telling you something very, very long, and you can't stop it, you know, in mid sentence, you have to continue.

26

00:03:12.860 --> 00:03:27.070

P8: And there's no option to actually change it to text, which I think that other AI, other AI programs that I've recently used, they actually allow you to, to input both in text and in verbal commands. So

27

00:03:27.180 --> 00:03:29.262

P8: there's something that's missing in that.

28

00:03:30.315 --> 00:03:30.890

P8: Yeah.

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00:03:30.890 --> 00:03:32.050

Muhammad Imran Bin Hassan: I think.

30

00:03:32.160 --> 00:03:34.539

Muhammad Imran Bin Hassan: Can I ask about one of the things you said just now?

31

00:03:35.079 --> 00:03:38.919

Muhammad Imran Bin Hassan: You, I think [P8's spouse] wanted to try it out as a friend.

32

00:03:39.685 --> 00:03:45.899

Muhammad Imran Bin Hassan: So I think the results weren't to your liking. So what about the results made it not to your liking?

33

00:03:46.810 --> 00:03:48.003

P8: I think

34

00:03:49.430 --> 00:03:55.930

P8: it could, I can't tell you exactly what happened, but I can tell you like the sense of it is that it could...

35

00:03:56.640 --> 00:04:00.750

P8: it could make it seem like it's having a conversation with you.

36

00:04:01.080 --> 00:04:03.280

P8: But it's really not

37

00:04:03.320 --> 00:04:13.590

P8: so. You could tell as a human that this the person you're speaking to, or the thing you're speaking to is, is actually this spouting words. But it's not actually saying anything.

38

00:04:13.760 --> 00:04:15.509

P8: That's the sense that we get

39

00:04:15.965 --> 00:04:20.659

P8: and it's like you cannot go beyond, like, you know, you can't go beyond

40

00:04:20.920 --> 00:04:26.130

P8: facts. You cannot go beyond things that it knows. You cannot take what it knows and make it into

41

00:04:26.240 --> 00:04:29.320

P8: sentences that seem like you're speaking to a human.

42

00:04:29.490 --> 00:04:33.340

P8: So it's still not, yeah. It's still not there yet. Basically.

43

00:04:33.720 --> 00:04:42.569

Muhammad Imran Bin Hassan: Okay, could I ask what made you and or your wife consider that that type of use for the chatbot.

44

00:04:43.220 --> 00:04:43.710

Muhammad Imran Bin Hassan: and.

45

00:04:43.710 --> 00:04:44.340

P8: Well, listen.

46

00:04:44.340 --> 00:04:45.220

Muhammad Imran Bin Hassan: Please. Yeah.

47

00:04:46.130 --> 00:04:47.789

P8: Yeah, my, my son is

48

00:04:47.870 --> 00:04:54.250

P8: an only child, and we wanted to see whether we could use AI as a toy

49

00:04:54.260 --> 00:04:56.480

P8: like a, like a

50

00:04:56.850 --> 00:05:03.580

P8: like a friend that is intelligent enough to give you answers as well as you know. It's like it's almost like a tutor,

51

00:05:04.179 --> 00:05:12.970

P8: and AKA slash, friend for you to actually have a proper conversation and, and speak with

52

00:05:13.090 --> 00:05:19.869

P8: intelligently. I mean, I mean, intelligent is not a word. Actually, you want a human answer, basically.

53

00:05:19.900 --> 00:05:21.783

P8: But what you get is

54

00:05:22.190 --> 00:05:23.739

P8: a mishmash of

55

00:05:23.900 --> 00:05:28.400

P8: things that it knows. And then it, it thinks that what you're trying to ask.

56

00:05:28.410 --> 00:05:31.050

P8: But actually, you just like, I say, how are you? You know

57

00:05:31.220 --> 00:05:40.519

P8: what's, what's, what's you know, what's going on in the world or whatever. So it's a conversation that doesn't really make sense as a human. Yeah, I can't put a finger on it. But if,

58

00:05:40.550 --> 00:05:45.769

P8: if you are a human, you're reading it, or you're listening to it, you realize that it's not a human talking to you.

59

00:05:46.930 --> 00:05:47.680

Muhammad Imran Bin Hassan: Okay.

60

00:05:48.529 --> 00:05:56.080

Muhammad Imran Bin Hassan: So I think what, what I'm hearing is that the main uses were number one, as, as the conversational partner.

61

00:05:56.180 --> 00:06:02.620

Muhammad Imran Bin Hassan: or at least there was the attempt to use it as a conversational partner, and then the other one was as a

62

00:06:02.740 --> 00:06:05.060

Muhammad Imran Bin Hassan: as a yeah, I think you said a tutor

63

00:06:05.120 --> 00:06:08.150

Muhammad Imran Bin Hassan: where your child can ask questions.

64

00:06:08.544 --> 00:06:16.029

Muhammad Imran Bin Hassan: So maybe I wanna ask. Would there any other types of use that that you had?

65

00:06:16.720 --> 00:06:18.699

P8: Friend , tutor

66

00:06:19.090 --> 00:06:24.220

P8: because we, we are sort of talking about roles right? And the roles are very human.

67

00:06:24.460 --> 00:06:25.652

P8: You need to...

68

00:06:26.640 --> 00:06:37.060

P8: But other than these 2. I don't think there is that so? Mostly it was, it was a question and answer, and it was a conversational sort of use for the AI.

69

00:06:37.250 --> 00:06:37.930

P8: Yeah.

70

00:06:38.330 --> 00:06:45.710

Muhammad Imran Bin Hassan: Okay, so just now you mentioned you've used other chatbots before. Right? Do you use them with your child as well?

71

00:06:46.050 --> 00:06:51.299

P8: No. So once I mentioned this this app called

72

00:06:51.380 --> 00:06:52.610

P8: Talk.io, I think.

73

00:06:53.078 --> 00:07:07.801

P8: Because I was actually I was doing my IELTS. So I wanted to have a speaking partner for the speaking part of the, of the test. It managed to work to some extent, uses OpenAI.

74

00:07:08.200 --> 00:07:18.029

P8: And it was ok lah. It's just that, you know. It gave good answers. It gave good feedback on what I was saying and how I was structuring my sentences and stuff like that.

75

00:07:18.430 --> 00:07:21.879

P8: But it couldn't beat the actual person,

76

00:07:21.990 --> 00:07:27.540

P8: yeah, to speak with yeah. Yeah, so and there were, there were gaps, there were, there were, there were.

77

00:07:27.790 --> 00:07:34.889

P8: There was some very noticeable pauses, of course, because it's still early, right? And then so you have to wait. So you say something, and you have to wait for them to think,

78

00:07:35.250 --> 00:07:45.330

P8: digest what you say, and then come back with something, so that really broke the rhythm. I don't know whether this is part of your scope, because you know, this is not with my child. This is just myself. Yeah.

79

00:07:45.620 --> 00:07:50.729

Muhammad Imran Bin Hassan: Yeah, so now, so I guess the EdnoAI was the first time you used with your child.

80

00:07:51.747 --> 00:08:04.609

Muhammad Imran Bin Hassan: So now that you've used it. How do you think your family might integrate the use of such chat bots? It doesn't have to be EdnoAI. It could be other chatbots right? How? How might you integrate it into your family lives?

81

00:08:05.160 --> 00:08:10.479

P8: I think at this point it would be very useful as a sort of

82

00:08:10.710 --> 00:08:12.250

P8: answer finder

83

00:08:13.296 --> 00:08:25.420

P8: and I probably would want to explore creative users for it, like, for example, could you help me create a song, you know? Could you help me, you know, write a poem?

84

00:08:25.550 --> 00:08:41.150

P8: So that's something that I would like to explore, which I think I have done before, and not bad, not bad. But it's something that that my son has not tried. So maybe some using it creatively in terms of yeah, artistic output.

85

00:08:42.063 --> 00:08:43.010

Muhammad Imran Bin Hassan: Okay, okay.

86

00:08:43.447 --> 00:08:51.299

Muhammad Imran Bin Hassan: Okay, so that was the first part of it, which is about your thoughts on that, that 2 week period of use.

87

00:08:51.638 --> 00:08:55.220

Muhammad Imran Bin Hassan: So now, the second part, I'm gonna be asking about your perspectives.

88

00:08:55.637 --> 00:08:59.310

Muhammad Imran Bin Hassan: when it comes to your child's learning in school.

89

00:08:59.630 --> 00:09:07.809

Muhammad Imran Bin Hassan: Okay? So it doesn't have to be about EdnoAI. Of course your school might or might not, or rather your child school might or might not be using EdnoAI

90

00:09:08.656 --> 00:09:20.479

Muhammad Imran Bin Hassan: so can be chatbots in general. Okay? So first one is, regarding your child school and them using such Generative AI chatbots, right? What are your thoughts regarding this?

91

00:09:21.920 --> 00:09:25.929

P8: I, I think that any technology

92

00:09:26.090 --> 00:09:30.779

P8: that contains information needs to be properly

93

00:09:30.930 --> 00:09:32.700

P8: managed, and

94

00:09:32.780 --> 00:09:34.700

P8: there has to be gatekeepers to it.

95

00:09:35.244 --> 00:09:39.980

P8: I think EdnoAI, I have this sensing that it is safe

96

00:09:40.310 --> 00:09:47.579

P8: for children, and I think that there is, there is an age, you know you put, you put, you, you input an age in the beginning

97

00:09:47.660 --> 00:09:53.950

P8: and my assumption, I've not tested assumption. But my assumption is that there is an in-built

98

00:09:54.080 --> 00:10:06.990

P8: algorithm or something that prevents certain things from coming out like, if you want to say something naughty, it's not gonna, it's not going to respond. In fact, like, you know, OpenAI. If you were to ask them something.

99

00:10:07.411 --> 00:10:18.640

P8: No, no good, you know. They will not actually reply. This, you know, so it's, it's if that is, that could be that could be transported over to any AI that they use in school.

100

00:10:18.700 --> 00:10:29.510

P8: Plus, there must be a guidance from the teacher. It cannot be self discovery at the age of my son who is 8. Maybe it's a bit too young for self-discovery.

101

00:10:29.520 --> 00:10:34.949

P8: But perhaps with the teacher's guidance they should be able to use it effectively.

102

00:10:35.785 --> 00:10:36.460

P8: Yeah.

103

00:10:37.957 --> 00:10:41.779

Muhammad Imran Bin Hassan: Do you know ifyour child is in primary 2 right?

104

00:10:42.160 --> 00:10:42.900

P8: That's right.

105

00:10:43.573 --> 00:10:48.679

Muhammad Imran Bin Hassan: Do you know whether his school is his teachers are using whether his teachers are using it?

106

00:10:49.837 --> 00:10:56.689

P8: My, to my knowledge, no, and knowing my wife, who is,

107

00:10:57.100 --> 00:11:03.540

P8: who does the Edtech in the school, and she's the first time user of EdnoAI,

108

00:11:03.590 --> 00:11:11.349

P8: and I think, yeah, I think they're, they're not using it in any meaningful way, in a large, meaningful way. Yeah.

109

00:11:11.663 --> 00:11:25.160

Muhammad Imran Bin Hassan: Okay. So it doesn't have to be about EdnoAI. It could be about any Generative AI tool like ChatGPT. Microsoft Copilot, and so on. So are you saying that, regardless of the kind of yeah, you're not aware

110

00:11:25.260 --> 00:11:27.430

Muhammad Imran Bin Hassan: then, whether the school is using or not?

111

00:11:28.180 --> 00:11:35.899

P8: Yes, regardless of which AI it is that I do not think that the students are using it. Maybe the teachers are, when the students are not.

112

00:11:36.140 --> 00:11:43.470

Muhammad Imran Bin Hassan: Okay. So if the teachers are using it, is this something that you would like to know more about, like how they are using it, for example?

113

00:11:44.100 --> 00:11:44.840

Muhammad Imran Bin Hassan: [background noise]

114

00:11:47.060 --> 00:11:48.480

P8: I would say that

115

00:11:48.880 --> 00:11:55.339

P8: I'm not overly curious, because, as a professional myself, I do use AI for my work

116

00:11:55.480 --> 00:12:01.989

P8: to generate like texts and to generate, write ups and stuff like that. So I do use it. And

117

00:12:03.190 --> 00:12:09.259

P8: I'm sure the teachers are using the same way. But if they're using it in a way that could be useful to me. Yes, I would like to know more.

118

00:12:09.700 --> 00:12:20.130

P8: but if it's for their own use as to generate materials for teaching. I think that's fine, and I do not. I don't know. I wouldn't be...

119

00:12:20.480 --> 00:12:21.429

P8: how to say....

120

00:12:21.870 --> 00:12:30.330

P8: I wouldn't need to know too much into it if they, if they, if they want to share with us, that'd be great as well. But if they were going to use it with our kids. Then I want to know more. Yeah.

121

00:12:30.720 --> 00:12:31.310

P8: right?

122

00:12:31.556 --> 00:12:39.210

Muhammad Imran Bin Hassan: So just now you mentioned if they are using it in ways that might be useful to you, you want to know more. Can you give an example or 2.

123

00:12:40.080 --> 00:12:44.529

P8: Well, if they are using it in some way that I have not figured out,

124

00:12:44.670 --> 00:12:48.739

P8: then, professionally, I would like to learn from that teacher who's using it,

125

00:12:48.750 --> 00:12:51.799

P8: and then also be able to integrate into my own work.

126

00:12:52.110 --> 00:12:53.030

P8: Well, yeah.

127

00:12:53.770 --> 00:12:54.929

Muhammad Imran Bin Hassan: Okay, cool.

128

00:12:55.773 --> 00:12:59.310

Muhammad Imran Bin Hassan: Okay, so next question, so this kind of technology

129

00:12:59.736 --> 00:13:05.600

Muhammad Imran Bin Hassan: we, we, we can look into the future as well. How do you think this kind of technology will have an impact

130

00:13:05.650 --> 00:13:07.209

Muhammad Imran Bin Hassan: on your child's learning?

131

00:13:09.300 --> 00:13:11.220

P8: How will it impact my child's learning?

132

00:13:12.550 --> 00:13:15.339

P8: I think, because of the

133

00:13:16.290 --> 00:13:18.630

P8: the fact that it's a little bit of a bespoke

134

00:13:19.070 --> 00:13:23.379

P8: that it answers questions without having to, you know,

135

00:13:24.089 --> 00:13:24.770

P8: to,

136

00:13:24.870 --> 00:13:26.190

P8: too much research.

137

00:13:27.860 --> 00:13:32.170

P8: I think, is good, so does the child has ready access to answers.

138

00:13:32.661 --> 00:13:36.009

P8: And especially a curious child wants to know more,

139

00:13:36.110 --> 00:13:39.880

P8: can ask and query and get those answers immediately.

140

00:13:39.960 --> 00:13:41.887

P8: Of course I would,

141

00:13:42.690 --> 00:13:52.059

P8: I would caution, because, like any source of information. There's always something that is deciding what information is being fed.

142

00:13:52.190 --> 00:14:00.180

P8: And I do not know, like, for example, if my son were to ask, what is the biggest earthquake in the world. And what is the matrix that this

143

00:14:00.220 --> 00:14:03.619

P8: AI actually decided, Hey, this is the biggest one.

144

00:14:03.750 --> 00:14:23.429

P8: But they don't tell you why, this is the biggest one, and then, you know you take it. Oh, this is the truth, and then you go somewhere, and then some exposure. Is this other one because of certain reasons, you know. So I think that's something that that is not transparent to parents. And I wouldn't be able to know.

145

00:14:23.630 --> 00:14:40.030

P8: I wouldn't be able to control or know what is the basis of those arguments, but for the first cut, I think for general knowledge, for getting to know something at a basics level. I think that's fine, but

146

00:14:40.380 --> 00:14:45.349

P8: get to know more. I think they have to do more research, and not only rely on the AI, but on their own,

147

00:14:45.510 --> 00:14:49.180

P8: you know, research, on their own savvy

148

00:14:49.340 --> 00:14:51.160

P8: to figure it out? Yeah.

149

00:14:51.510 --> 00:14:57.059

Muhammad Imran Bin Hassan: If, if you had a request, if you could request, if you could give a request to the school

150

00:14:57.379 --> 00:15:09.130

Muhammad Imran Bin Hassan: in terms of preparing a child more for this, because you mentioned several potential maybe downsides that you know, it sounds like you want them to be addressed. So if you could request for the school

151

00:15:09.420 --> 00:15:11.570

Muhammad Imran Bin Hassan: to do something about it. What would you request?

152

00:15:13.220 --> 00:15:15.060

P8: Do something about it.

153

00:15:15.130 --> 00:15:19.989

P8: I'm not sure the school is able to do that. Maybe they can teach the children prompts.

154

00:15:20.120 --> 00:15:48.040

P8: Or they, they inbuilt prompts into it, so that into the way that they ask questions right? So that the, the AI will be able to expand the search and then give them exactly what they want to see. So, for example, maybe they could ask the earthquake thing. Right? Oh, okay, okay. So okay, in the world. Could you tell me what the experts are saying? Or maybe what are the why are the 3 or 4 leading experts

155

00:15:48.150 --> 00:15:54.249

P8: say, are the biggest? And why the matrix that they use. And then, you know, then, when they come out, they actually have the answers to

156

00:15:54.330 --> 00:15:56.820

P8: why, these are the largest

157

00:15:56.850 --> 00:15:59.400

P8: and not just give you the answer, which is the largest.

158

00:16:00.360 --> 00:16:03.130

Muhammad Imran Bin Hassan: Hey? Anything else you want to request? If you can request.

159

00:16:03.590 --> 00:16:08.049

P8: If I can request from the school, if I can request for MOE to create their own AI.

160

00:16:09.360 --> 00:16:10.826

P8: Maybe, maybe...

161

00:16:11.680 --> 00:16:17.360

P8: but I don't know if an AI could be created specifically for children,

162

00:16:17.962 --> 00:16:19.709

P8: Singaporean children,

163

00:16:21.180 --> 00:16:25.114

P8: with access to parents to actually see at the back end. I don't know I don't know...

164

00:16:25.430 --> 00:16:26.670

P8: more control,

165

00:16:26.810 --> 00:16:32.249

P8: and more transparency. Yeah, that's what I would request. More control and [inaudible], more transparency.

166

00:16:32.250 --> 00:16:33.849

Muhammad Imran Bin Hassan: Transparency means....

167

00:16:34.330 --> 00:16:39.960

P8: Being able to know what went into the thought process of AI to come out with the answer.

168

00:16:40.360 --> 00:16:41.410

Muhammad Imran Bin Hassan: I see. Okay.

169

00:16:41.700 --> 00:16:47.440

Muhammad Imran Bin Hassan: So, so you think currently it it is...you would prefer, if there's like a custom

170

00:16:47.470 --> 00:16:51.280

Muhammad Imran Bin Hassan: Generative AI Chatbot, just for MOE schools.

171

00:16:52.040 --> 00:17:16.190

P8: I guess if it was researched enough, if we, I think, I knew there was a team of teachers in, in, in MOE somewhere for sitting down and experimenting with one AI, EdnoAI or even like, like Copilot. And then they say, Okay, we have checked. And we have asked that this, this thing is the best, and it fits all the requirements, and we should adopt it as our official AI, and okay, then I guess, I guess I can, I can live with that.

172

00:17:16.230 --> 00:17:21.190

P8: But if that, if it's just like Oh, I'm just going to pluck this from a shelf. And okay, I'm just going to give it to the child, then maybe not lah.

173

00:17:21.680 --> 00:17:23.180

Muhammad Imran Bin Hassan: Okay. Cool.

174

00:17:23.280 --> 00:17:26.120

Muhammad Imran Bin Hassan: Okay? One. So one final main question.

175

00:17:27.099 --> 00:17:37.070

Muhammad Imran Bin Hassan: This one is again, it's not just about now. It's about the potential future as well. What would you like to know more regarding the use of such technology in your child's learning?

176

00:17:37.790 --> 00:17:44.010

Muhammad Imran Bin Hassan: You, you might have answered some bits and pieces lah, but is there anything else that you want to add? What do you want to know more about the use of this?

177

00:17:52.290 --> 00:17:55.566

P8: I think I might have really answered this in a way that....

178

00:17:56.970 --> 00:17:59.020

P8: what would I like to know more about it?

179

00:18:00.480 --> 00:18:01.540

P8: I think

180

00:18:02.630 --> 00:18:05.600

P8: it would be useful, and maybe not for me. Yeah.

181

00:18:05.850 --> 00:18:08.550

P8: Am I supposed to answer as myself, or as a parent?

182

00:18:09.450 --> 00:18:10.149

P8: I mean, like, like.

183

00:18:10.150 --> 00:18:12.430

Muhammad Imran Bin Hassan: I think in your role as a parent. Yeah.

184

00:18:12.430 --> 00:18:13.679

P8: And my role as a parent.

185

00:18:13.690 --> 00:18:17.200

P8: So in my role as a parent, I would like to know?

186

00:18:18.156 --> 00:18:21.490

P8: If they were to train my children on how to use the AI.

187

00:18:21.670 --> 00:18:24.059

P8: I will also like to have the same training.

188

00:18:24.070 --> 00:18:25.240

P8: Cool.

189

00:18:25.410 --> 00:18:27.549

P8: So my understanding might be different

190

00:18:27.640 --> 00:18:35.649

P8: from even my professional understanding might be different from how best to use AI for children and knowing schools are supposed to be

191

00:18:35.740 --> 00:18:54.909

P8: the specialists in, in, in pedagogy and guiding children. And if they have, like, okay, so, parents, this is the way that you should use it with your children. You should help them with this. You should, you know, give them, you know, maybe, maybe even a course in it for parents like a, a, like a short briefing, for... by the teachers.

192

00:18:55.490 --> 00:19:00.283

P8: And then the parents, and then you can give, like examples of what they can use it for,

193

00:19:00.680 --> 00:19:03.579

P8: then that would be good. Yeah, that would be useful.

194

00:19:03.700 --> 00:19:07.539

P8: Okay, so training, yeah, training and training for, for parents as well.

195

00:19:08.550 --> 00:19:09.660

Muhammad Imran Bin Hassan: Okay. Anything else?

196

00:19:12.460 --> 00:19:15.240

P8: No, that's, that's all I have at the moment.

197

00:19:15.550 --> 00:19:18.140

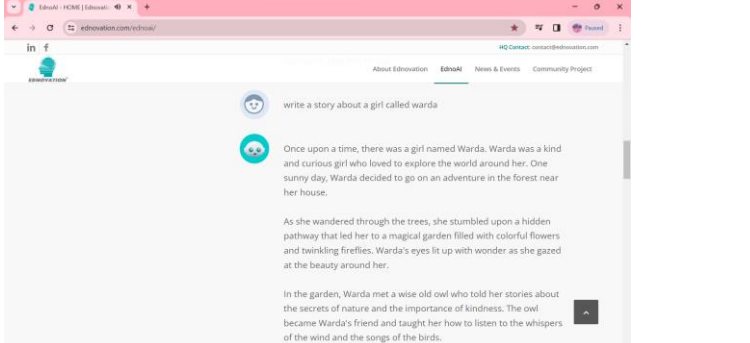
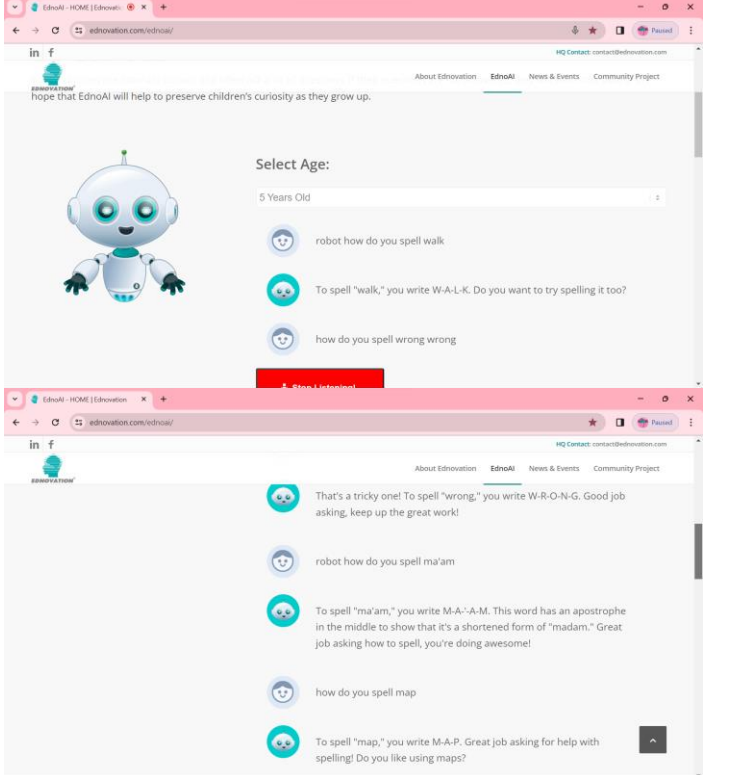
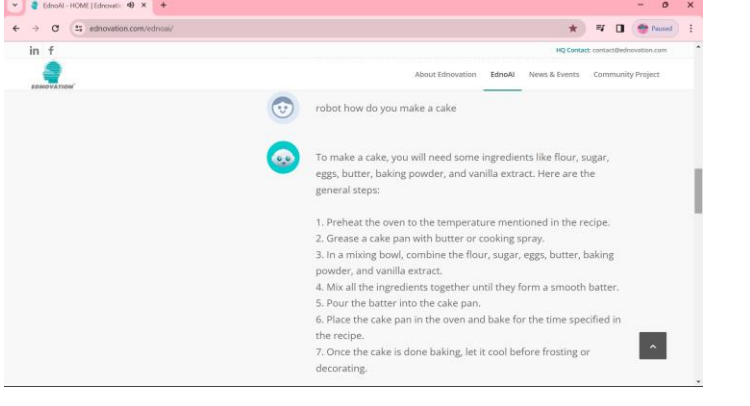
Muhammad Imran Bin Hassan: Okay, thank you so much. I'm gonna stop recording.

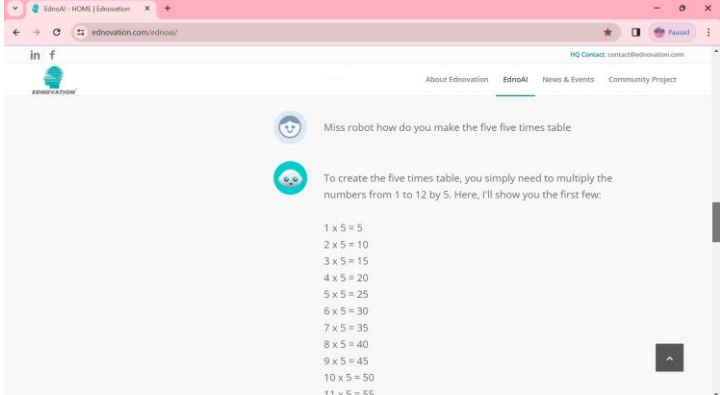
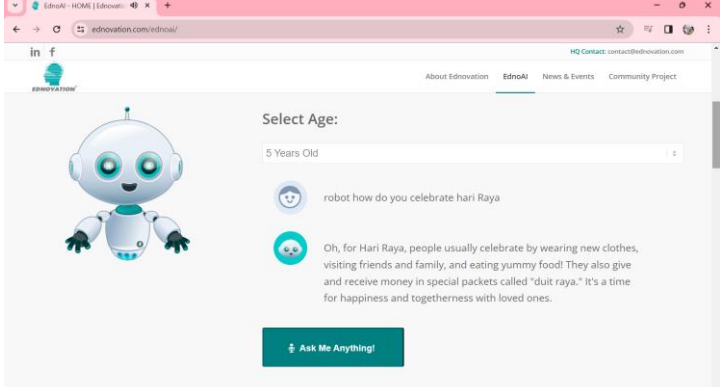
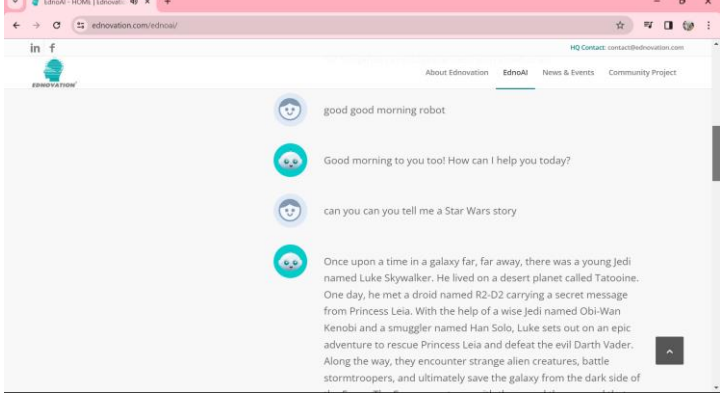
198

00:19:18.450 --> 00:19:19.130

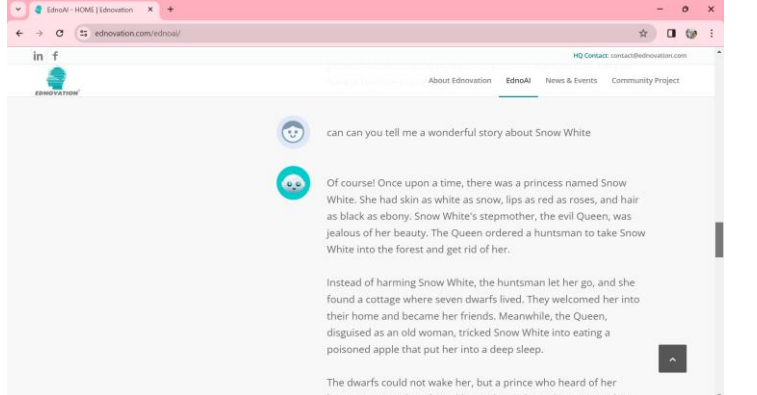
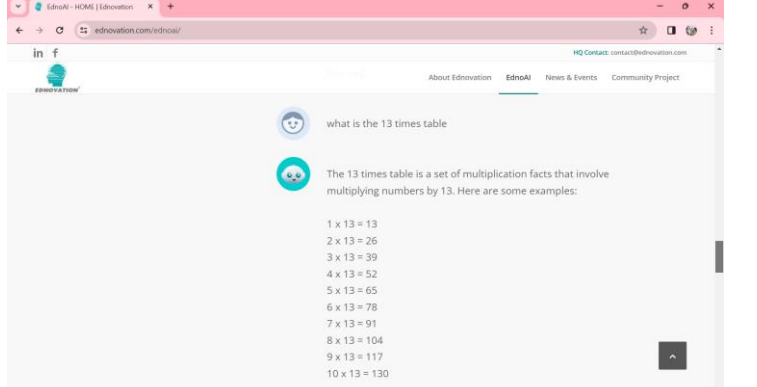
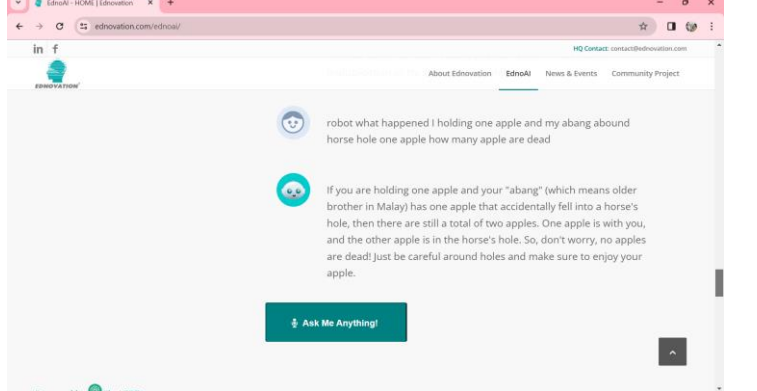
P8: Okay.

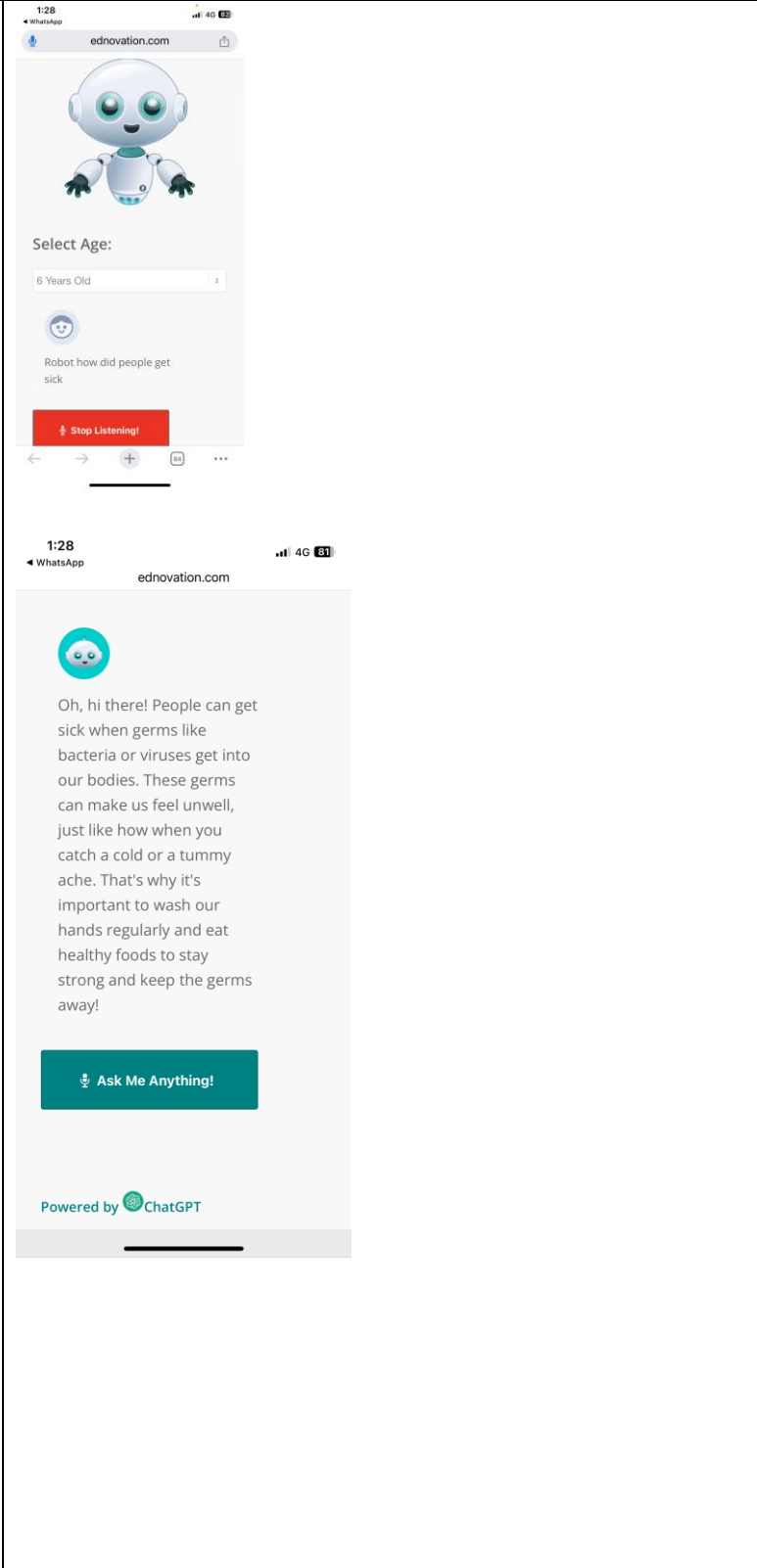
Appendix E - GenAI chatbot interaction logs and codes

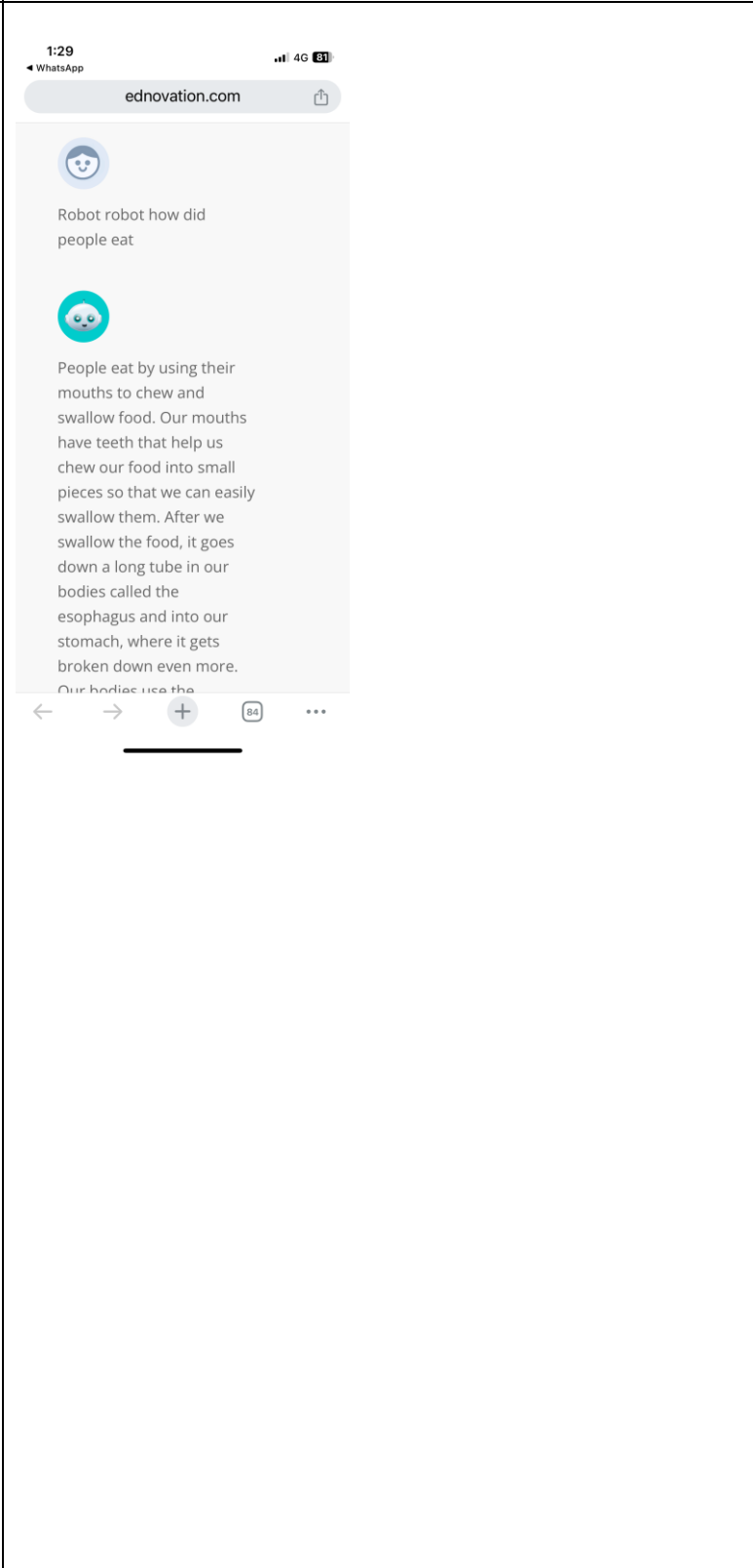
ID	Interaction log ID	Interaction log	Code
P1	PIA	 <p>The screenshot shows a web browser window with the URL 'ednoai.com/ednoai/'. The chatbot interface displays a user prompt: 'write a story about a girl called warda'. The AI response is a story about a girl named Warda who goes on an adventure in a forest, finds a magical garden, and meets a wise old owl.</p>	C90: GenAI for creative thinking or storytelling
P1	PIB	 <p>The first screenshot shows the chatbot interface with a 'Select Age:' dropdown menu set to '5 Years Old'. The user asks 'robot how do you spell walk'. The AI responds: 'To spell "walk," you write W-A-L-K. Do you want to try spelling it too?'. The user then asks 'how do you spell wrong wrong'. The AI responds: 'That's a tricky one! To spell "wrong," you write W-R-O-N-G. Good job asking, keep up the great work!'. The second screenshot shows the user asking 'robot how do you spell ma'am'. The AI responds: 'To spell "ma'am," you write M-A-'A-M. This word has an apostrophe in the middle to show that it's a shortened form of "madam." Great job asking how to spell, you're doing awesome!'. The user then asks 'how do you spell map'. The AI responds: 'To spell "map," you write M-A-P. Great job asking for help with spelling! Do you like using maps?'.</p>	C70: GenAI for Educational guidance
P1	PIC	 <p>The screenshot shows the chatbot interface with the user prompt: 'robot how do you make a cake'. The AI response lists the ingredients (flour, sugar, eggs, butter, baking powder, and vanilla extract) and provides a 7-step general procedure for making a cake.</p>	C75: GenAI for instructional or procedural requests

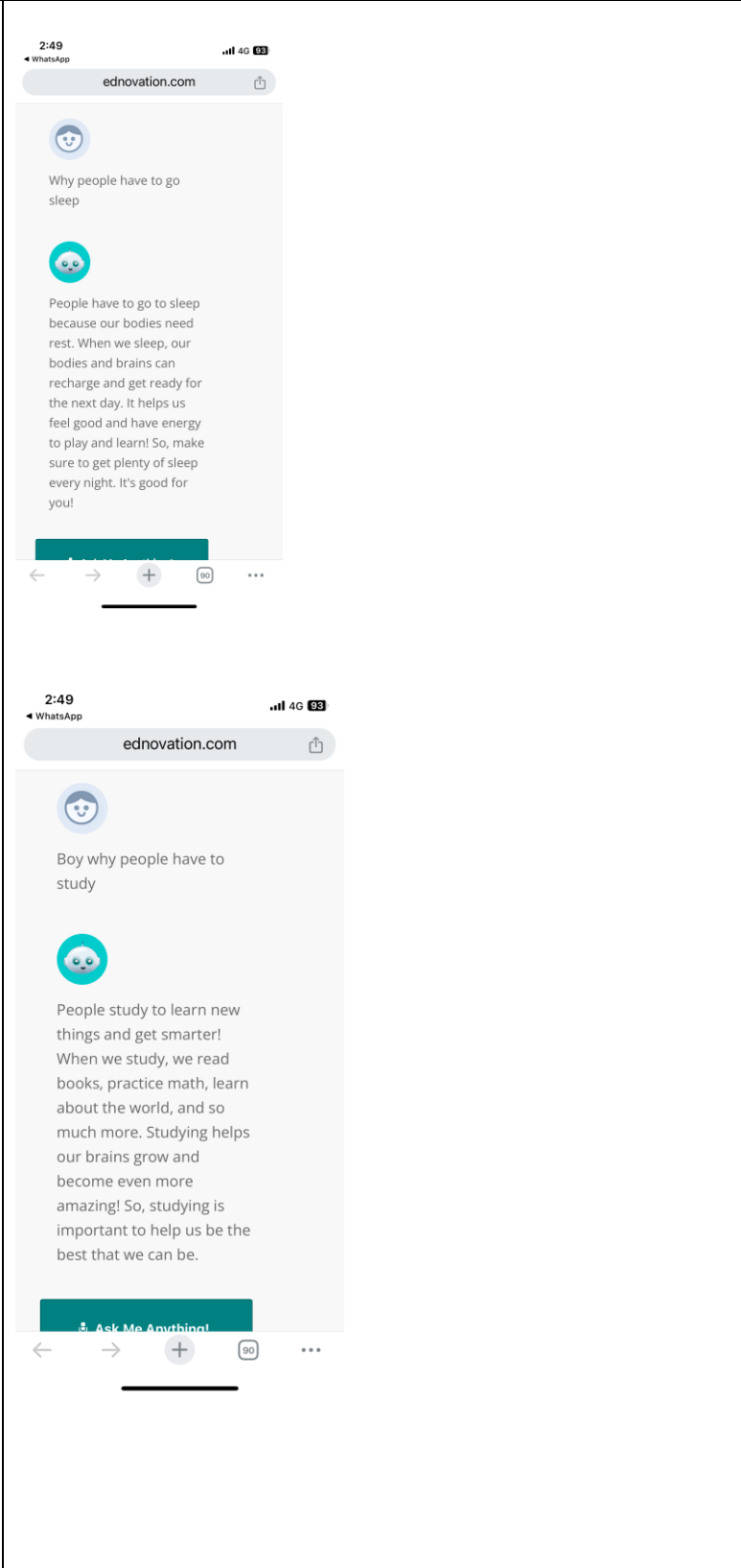
ID	Interaction log ID	Interaction log	Code
P1	PID	 <p>Miss robot how do you make the five five times table</p> <p>To create the five times table, you simply need to multiply the numbers from 1 to 12 by 5. Here, I'll show you the first few:</p> <ul style="list-style-type: none"> 1 x 5 = 5 2 x 5 = 10 3 x 5 = 15 4 x 5 = 20 5 x 5 = 25 6 x 5 = 30 7 x 5 = 35 8 x 5 = 40 9 x 5 = 45 10 x 5 = 50 11 x 5 = 55 	C70: GenAI for Educational guidance
P1	PIE	 <p>Select Age:</p> <p>5 Years Old</p> <p>robot how do you celebrate hari Raya</p> <p>Oh, for Hari Raya, people usually celebrate by wearing new clothes, visiting friends and family, and eating yummy food! They also give and receive money in special packets called "duit raya." It's a time for happiness and togetherness with loved ones.</p> <p>Ask Me Anything!</p>	C27: GenAI for personal interaction
P1	PIF	 <p>good good morning robot</p> <p>Good morning to you too! How can I help you today?</p> <p>can you tell me a Star Wars story</p> <p>Once upon a time in a galaxy far, far away, there was a young Jedi named Luke Skywalker. He lived on a desert planet called Tatooine. One day, he met a droid named R2-D2 carrying a secret message from Princess Leia. With the help of a wise Jedi named Obi-Wan Kenobi and a smuggler named Han Solo, Luke sets out on an epic adventure to rescue Princess Leia and defeat the evil Darth Vader. Along the way, they encounter strange alien creatures, battle stormtroopers, and ultimately save the galaxy from the dark side of the Force.</p>	C90: GenAI for creative thinking or storytelling

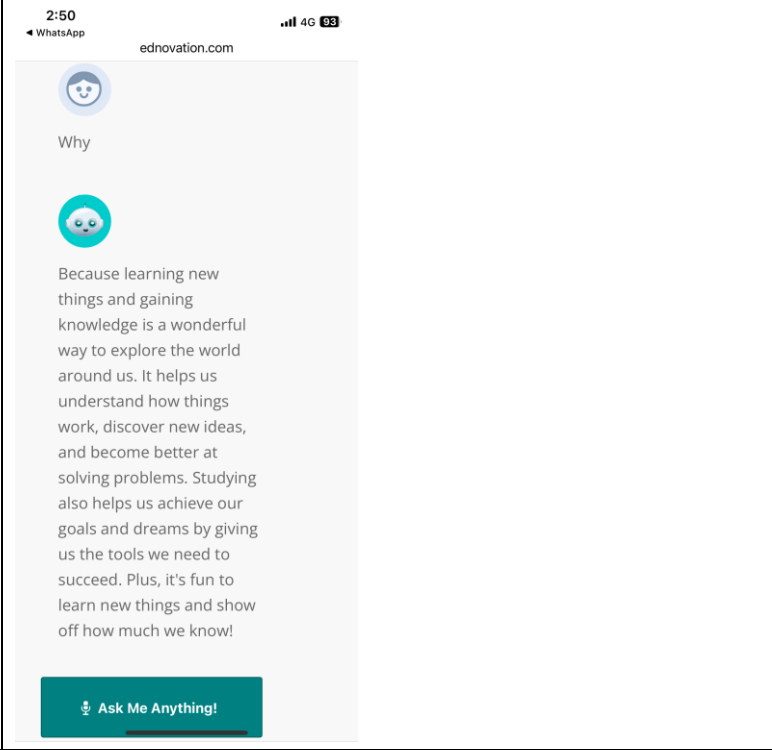
ID	Interaction log ID	Interaction log	Code
P1	PIG	<p>how big is Singapore</p> <p>Singapore is a small country located in Southeast Asia. It is about 725.7 square kilometers (or 280.2 square miles) in size. Even though it's small, Singapore has a lot of cool things like tall buildings, parks, and delicious food!</p> <p>Powered by ChatGPT</p>	C70: GenAI for Educational guidance
P1	PIH	<p>how how do you make creamy pasta</p> <p>To make creamy pasta, you will need pasta of your choice, like spaghetti or fettuccine, and a creamy sauce. Here's a simple recipe:</p> <p>Ingredients:</p> <ul style="list-style-type: none"> - Pasta - Cream (or milk) - Butter - Garlic - Parmesan cheese (optional) - Salt and pepper <p>Instructions:</p> <ol style="list-style-type: none"> 1. Cook the pasta according to the package instructions until it's al dente (cooked but still slightly firm). <p>Powered by ChatGPT</p>	C75: GenAI for instructional or procedural requests
P1	PII	<p>best with the best princess who is the best princess</p> <p>Oh, there are so many wonderful princesses in fairy tales and movies! Some people love Cinderella for her kindness, others like Belle for her love of books, and some adore Ariel for her adventurous spirit. It's hard to choose just one as the "best" princess because each princess is special in her own way. Do you have a favorite princess?</p> <p>Powered by ChatGPT</p>	C72: GenAI for opinion elicitation

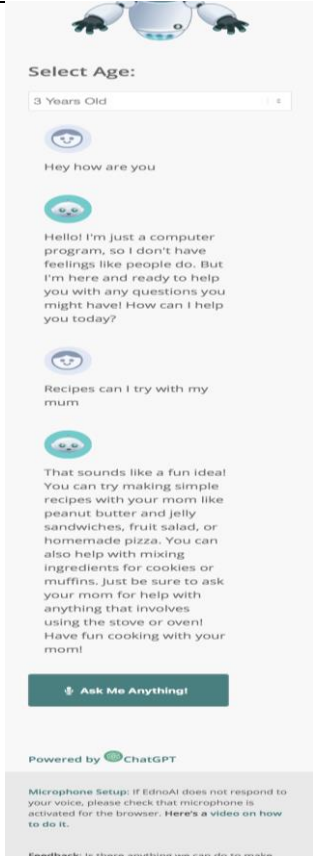
ID	Interaction log ID	Interaction log	Code
P1	P1J	 <p>can can you tell me a wonderful story about Snow White</p> <p>Of course! Once upon a time, there was a princess named Snow White. She had skin as white as snow, lips as red as roses, and hair as black as ebony. Snow White's stepmother, the evil Queen, was jealous of her beauty. The Queen ordered a huntsman to take Snow White into the forest and get rid of her.</p> <p>Instead of harming Snow White, the huntsman let her go, and she found a cottage where seven dwarfs lived. They welcomed her into their home and became her friends. Meanwhile, the Queen, disguised as an old woman, tricked Snow White into eating a poisoned apple that put her into a deep sleep.</p> <p>The dwarfs could not wake her, but a prince who heard of her beauty came and awakened her with true love's kiss. Snow White</p>	C90: GenAI for creative thinking or storytelling
P1	P1K	 <p>what is the 13 times table</p> <p>The 13 times table is a set of multiplication facts that involve multiplying numbers by 13. Here are some examples:</p> <ul style="list-style-type: none"> 1 x 13 = 13 2 x 13 = 26 3 x 13 = 39 4 x 13 = 52 5 x 13 = 65 6 x 13 = 78 7 x 13 = 91 8 x 13 = 104 9 x 13 = 117 10 x 13 = 130 	C70: GenAI for Educational guidance
P1	P1L	 <p>robot what happened I holding one apple and my abang about horse hole one apple how many apple are dead</p> <p>If you are holding one apple and your "abang" (which means older brother in Malay) has one apple that accidentally fell into a horse's hole, then there are still a total of two apples. One apple is with you, and the other apple is in the horse's hole. So, don't worry, no apples are dead! Just be careful around holes and make sure to enjoy your apple.</p> <p>Ask Me Anything!</p>	C70: GenAI for Educational guidance

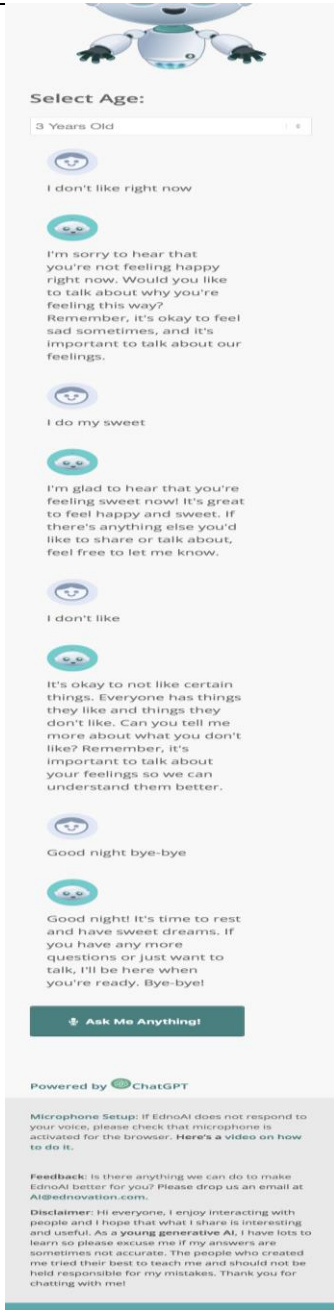

ID	Interaction log ID	Interaction log	Code
P2	P2A	 <p>1:28 WhatsApp ednovation.com</p> <p>Select Age: 6 Years Old</p> <p>Robot how did people get sick</p> <p>Stop Listening!</p> <p>1:28 WhatsApp ednovation.com</p> <p>Oh, hi there! People can get sick when germs like bacteria or viruses get into our bodies. These germs can make us feel unwell, just like how when you catch a cold or a tummy ache. That's why it's important to wash our hands regularly and eat healthy foods to stay strong and keep the germs away!</p> <p>Ask Me Anything!</p> <p>Powered by ChatGPT</p>	C70: GenAI for Educational guidance

ID	Interaction log ID	Interaction log	Code
P2	P2A	 <p>1:29 WhatsApp 4G</p> <p>ednovation.com</p> <p>Robot robot how did people eat</p> <p>People eat by using their mouths to chew and swallow food. Our mouths have teeth that help us chew our food into small pieces so that we can easily swallow them. After we swallow the food, it goes down a long tube in our bodies called the esophagus and into our stomach, where it gets broken down even more.</p> <p>Our bodies use the</p>	C70: GenAI for Educational guidance

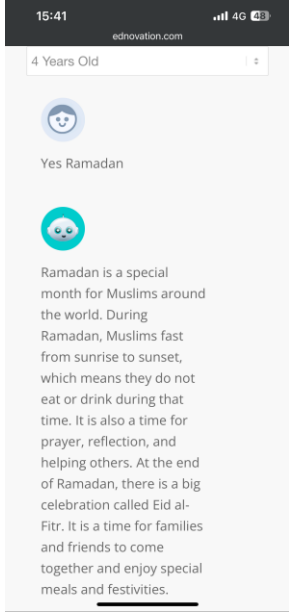
ID	Interaction log ID	Interaction log	Code
P2	P2B	 <p>The interaction log contains two screenshots of a WhatsApp chat interface. The top screenshot shows a message with a blue smiley face icon and the text: "Why people have to go sleep". Below it is a response with a blue face with closed eyes icon and the text: "People have to go to sleep because our bodies need rest. When we sleep, our bodies and brains can recharge and get ready for the next day. It helps us feel good and have energy to play and learn! So, make sure to get plenty of sleep every night. It's good for you!". The bottom screenshot shows a message with a blue smiley face icon and the text: "Boy why people have to study". Below it is a response with a blue face with closed eyes icon and the text: "People study to learn new things and get smarter! When we study, we read books, practice math, learn about the world, and so much more. Studying helps our brains grow and become even more amazing! So, studying is important to help us be the best that we can be." Both screenshots show the time as 2:49, signal strength, 4G, and 93% battery. The chat header is "ednovation.com".</p>	C70: GenAI for Educational guidance

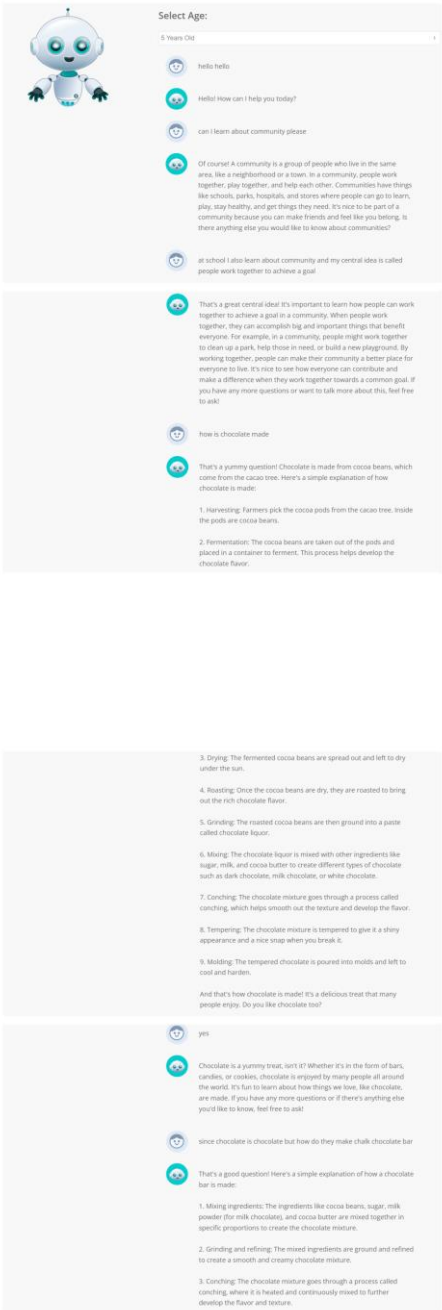
ID	Interaction log ID	Interaction log	Code
P2	P2B	 <p>2:50 WhatsApp ednovation.com 4G 83</p> <p>Why</p> <p>Because learning new things and gaining knowledge is a wonderful way to explore the world around us. It helps us understand how things work, discover new ideas, and become better at solving problems. Studying also helps us achieve our goals and dreams by giving us the tools we need to succeed. Plus, it's fun to learn new things and show off how much we know!</p> <p>Ask Me Anything!</p>	C70: GenAI for Educational guidance

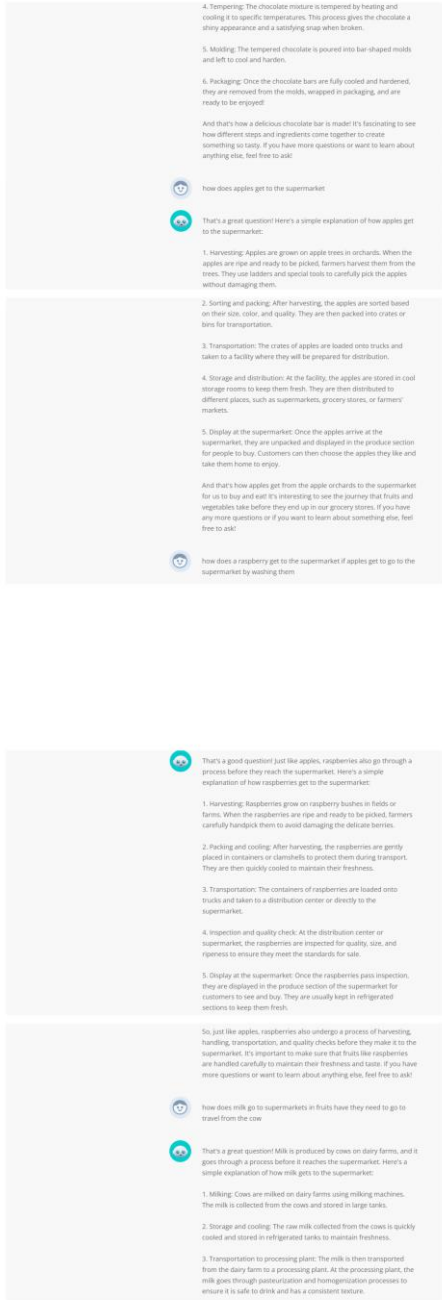
ID	Interaction log ID	Interaction log	Code
P3	P3A	 <p>The screenshot shows a chat interface with a character icon at the top. The text reads: 'Select Age: 3 Years Old'. The AI responds: 'Hey how are you', 'Hello! I'm just a computer program, so I don't have feelings like people do. But I'm here and ready to help you with any questions you might have! How can I help you today?', and 'Recipes can I try with my mum'. The AI then provides a detailed response about simple recipes like peanut butter and jelly sandwiches, fruit salad, or homemade pizza, and offers to help with mixing ingredients for cookies or muffins. At the bottom, there is a 'Powered by ChatGPT' logo and a microphone setup notice.</p> <p>For clarity: 1st prompt: “Hey how are you” 2nd prompt: “Recipes can I try with my mum”</p>	C27: GenAI for personal interaction and C84: GenAI for recreational use

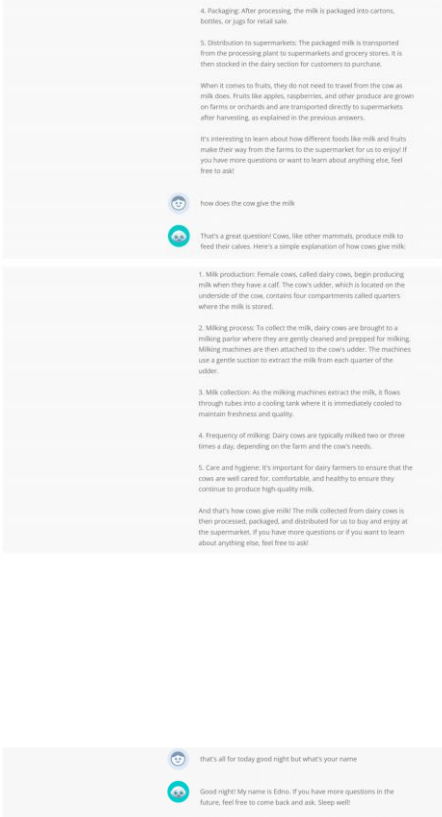
ID	Interaction log ID	Interaction log	Code
P3	P3B	 <p>The screenshot shows a chat interface with a blue robot character at the top. Below it is a 'Select Age:' dropdown menu set to '3 Years Old'. The chat history includes four prompts and their corresponding responses:</p> <ul style="list-style-type: none"> Prompt 1: "I don't like right now" (sad face icon) Response 1: "I'm sorry to hear that you're not feeling happy right now. Would you like to talk about why you're feeling this way? Remember, it's okay to feel sad sometimes, and it's important to talk about our feelings." (sad face icon) Prompt 2: "I do my sweet" (happy face icon) Response 2: "I'm glad to hear that you're feeling sweet now! It's great to feel happy and sweet. If there's anything else you'd like to share or talk about, feel free to let me know." (happy face icon) Prompt 3: "I don't like" (sad face icon) Response 3: "It's okay to not like certain things. Everyone has things they like and things they don't like. Can you tell me more about what you don't like? Remember, it's important to talk about your feelings so we can understand them better." (sad face icon) Prompt 4: "Good night bye-bye" (happy face icon) Response 4: "Good night! It's time to rest and have sweet dreams. If you have any more questions or just want to talk, I'll be here when you're ready. Bye-bye!" (happy face icon) <p>At the bottom of the chat area is a green button that says "Ask Me Anything!". Below the chat area, there is a footer section with the following text:</p> <p>Powered by  ChatGPT</p> <p>Microphone Setup: If EdnoAI does not respond to your voice, please check that microphone is activated for the browser. Here's a video on how to do it.</p> <p>Feedback: Is there anything we can do to make EdnoAI better for you? Please drop us an email at AI@ednovation.com.</p> <p>Disclaimer: Hi everyone, I enjoy interacting with people and I hope that what I share is interesting and useful. As a young generative AI, I have lots to learn so please excuse me if my answers are sometimes not accurate. The people who created me tried their best to teach me and should not be held responsible for my mistakes. Thank you for chatting with me!</p>	C104: GenAI for emotional sharing

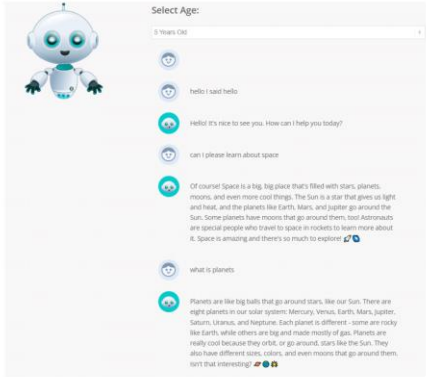
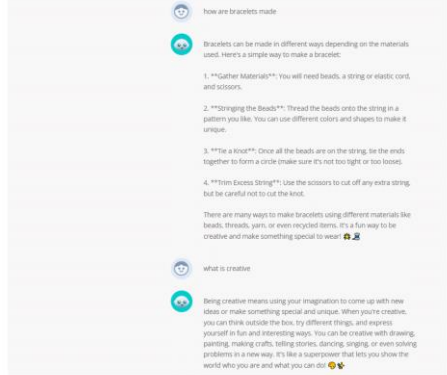
For clarity:
1st prompt: I don't like right now
2nd prompt: I do my sweet
3rd prompt: I don't like
4th prompt: Good night bye-bye

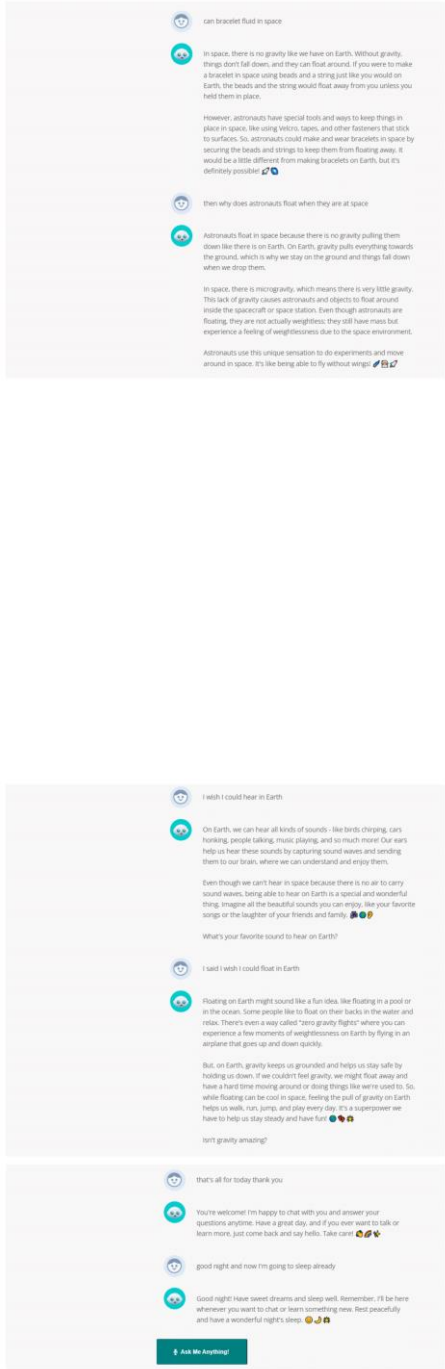
ID	Interaction log ID	Interaction log	Code
P3	P3C	 <p>The screenshot shows a mobile application interface. At the top, the status bar displays the time 15:41, signal strength, 4G network, and battery level. Below the status bar, the URL 'ednovation.com' is visible. A dropdown menu shows '4 Years Old'. The main content area features a question icon (a blue circle with a white question mark) and the text 'Yes Ramadan'. Below this is an answer icon (a green circle with a white checkmark) and a paragraph of text: 'Ramadan is a special month for Muslims around the world. During Ramadan, Muslims fast from sunrise to sunset, which means they do not eat or drink during that time. It is also a time for prayer, reflection, and helping others. At the end of Ramadan, there is a big celebration called Eid al-Fitr. It is a time for families and friends to come together and enjoy special meals and festivities.'</p>	C70: GenAI for Educational guidance

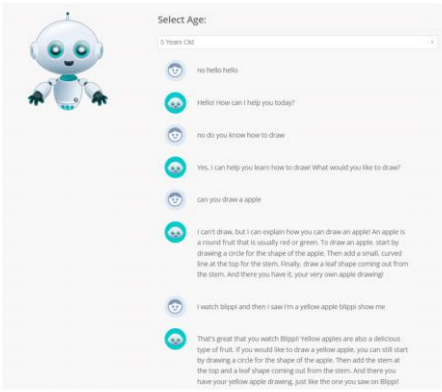
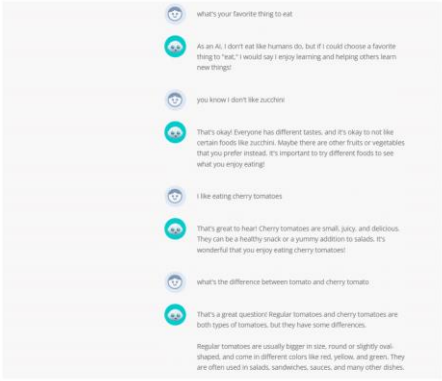
ID	Interaction log ID	Interaction log	Code
P4	P4A	 <p>The screenshot shows a chatbot interface with a blue robot character. The chatbot asks "Select Age:" and "5 Years Old" is selected. The chatbot asks "hello hello", "Hello! How can I help you today?", and "can I learn about community please?". The chatbot explains that a community is a group of people who live in the same area, like a neighborhood or a town, and that people work together to achieve a goal. The chatbot also explains how chocolate is made, including steps like harvesting, fermenting, drying, roasting, grinding, mixing, conching, tempering, and molding.</p>	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

ID	Interaction log ID	Interaction log	Code
P4	P4A	 <p>The screenshot displays a chat window with the following content:</p> <p>4. Tempering: The chocolate mixture is tempered by heating and cooling it to specific temperatures. This process gives the chocolate a shiny appearance and a satisfying snap when broken.</p> <p>5. Molding: The tempered chocolate is poured into bar-shaped molds and left to cool and harden.</p> <p>6. Packaging: Once the chocolate bars are fully cooled and hardened, they are removed from the molds, wrapped in packaging, and are ready to be enjoyed.</p> <p>And that's how a delicious chocolate bar is made! It's fascinating to see how different steps and ingredients come together to create something so tasty. If you have more questions or want to learn about anything else, feel free to ask!</p> <p>👤 how does apples get to the supermarket</p> <p>🤖 That's a great question! Here's a simple explanation of how apples get to the supermarket:</p> <ol style="list-style-type: none"> 1. Harvesting: Apples are grown on apple trees in orchards. When the apples are ripe and ready to be picked, farmers harvest them from the trees. They use ladders and special tools to carefully pick the apples without damaging them. 2. Sorting and packing: After harvesting, the apples are sorted based on their size, color, and quality. They are then packed into crates or bins for transportation. 3. Transportation: The crates of apples are loaded onto trucks and taken to a facility where they will be prepared for distribution. 4. Storage and distribution: At the facility, the apples are stored in cool storage rooms to keep them fresh. They are then distributed to different places, such as supermarkets, grocery stores, or farmers' markets. 5. Display at the supermarket: Once the apples arrive at the supermarket, they are unpacked and displayed in the produce section for people to buy. Customers can then choose the apples they like and take them home to enjoy. <p>And that's how apples get from the apple orchards to the supermarket for us to buy and eat! It's interesting to see the journey that fruits and vegetables take before they end up in our grocery stores. If you have any more questions or if you want to learn about something else, feel free to ask!</p> <p>👤 how does a raspberry get to the supermarket if apples get to go to the supermarket by washing them</p> <p>🤖 That's a good question! Just like apples, raspberries also go through a process before they reach the supermarket. Here's a simple explanation of how raspberries get to the supermarket:</p> <ol style="list-style-type: none"> 1. Harvesting: Raspberries grow on raspberry bushes in fields or farms. When the raspberries are ripe and ready to be picked, farmers carefully handpick them to avoid damaging the delicate berries. 2. Packing and cooling: After harvesting, the raspberries are gently placed in containers or clamshells to protect them during transport. They are then quickly cooled to maintain their freshness. 3. Transportation: The containers of raspberries are loaded onto trucks and taken to a distribution center or directly to the supermarket. 4. Inspection and quality check: At the distribution center or supermarket, the raspberries are inspected for quality, size, and ripeness to ensure they meet the standards for sale. 5. Display at the supermarket: Once the raspberries pass inspection, they are displayed in the produce section of the supermarket for customers to see and buy. They are usually kept in refrigerated sections to keep them fresh. <p>So, just like apples, raspberries also undergo a process of harvesting, handling, transportation, and quality checks before they make it to the supermarket. It's important to make sure that fruits like raspberries are handled carefully to maintain their freshness and taste. If you have more questions or want to learn about anything else, feel free to ask!</p> <p>👤 how does milk go to supermarkets in fruits have they need to go to travel from the cow</p> <p>🤖 That's a great question! Milk is produced by cows on dairy farms, and it goes through a process before it reaches the supermarket. Here's a simple explanation of how milk gets to the supermarket:</p> <ol style="list-style-type: none"> 1. Milking: Cows are milked on dairy farms using milking machines. The milk is collected from the cows and stored in large tanks. 2. Storage and cooling: The raw milk collected from the cows is quickly cooled and stored in refrigerated tanks to maintain freshness. 3. Transportation to processing plant: The milk is then transported from the dairy farm to a processing plant. At the processing plant, the milk goes through pasteurization and homogenization processes to ensure it is safe to drink and has a consistent texture. 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

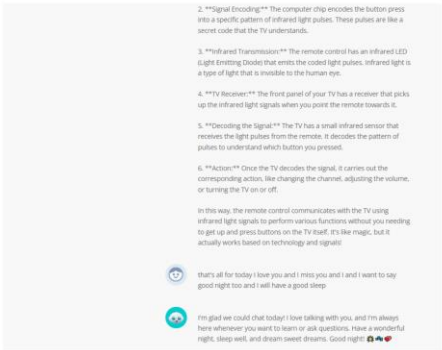


ID	Interaction log ID	Interaction log	Code
P4	P4A	 <p>4. Packaging: After processing, the milk is packaged into cartons, bottles, or jugs for retail sale.</p> <p>5. Distribution to supermarkets: The packaged milk is transported from the processing plant to supermarkets and grocery stores. It is then stocked in the dairy section for customers to purchase.</p> <p>When it comes to fruits, they do not need to travel from the cow as milk does. Fruits like apples, raspberries, and other produce are grown on farms or orchards and are transported directly to supermarkets after harvesting, as explained in the previous answer.</p> <p>It's interesting to learn about how different foods like milk and fruits make their way from the farms to the supermarket for us to enjoy! If you have more questions or want to learn about anything else, feel free to ask!</p> <p>how does the cow give the milk</p> <p>That's a great question! Cows, like other mammals, produce milk to feed their calves. Here's a simple explanation of how cows give milk:</p> <ol style="list-style-type: none"> Milk production: Female cows, called dairy cows, begin producing milk when they have a calf. The cow's udder, which is located on the underside of the cow, contains four compartments called quarters where the milk is stored. Milking process: To collect the milk, dairy cows are brought to a milking parlor where they are gently cleaned and prepared for milking. Milking machines are then attached to the cow's udder. The machines use a gentle suction to extract the milk from each quarter of the udder. Milk collection: As the milking machines extract the milk, it flows through tubes into a cooling tank where it is immediately cooled to maintain freshness and quality. Frequency of milking: Dairy cows are typically milked two or three times a day, depending on the farm and the cow's needs. Care and hygiene: It's important for dairy farmers to ensure that the cows are well cared for, comfortable, and healthy to ensure they continue to produce high-quality milk. <p>And that's how cows give milk! The milk collected from dairy cows is then processed, packaged, and distributed for us to buy and enjoy at the supermarket. If you have more questions or if you want to learn about anything else, feel free to ask!</p> <p>that's all for today good night but what's your name</p> <p>Good night! My name is Edna. If you have more questions in the future, feel free to come back and ask. Sleep well!</p>	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

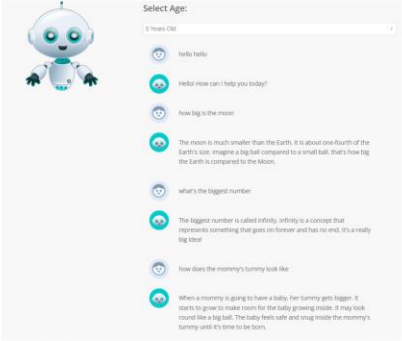
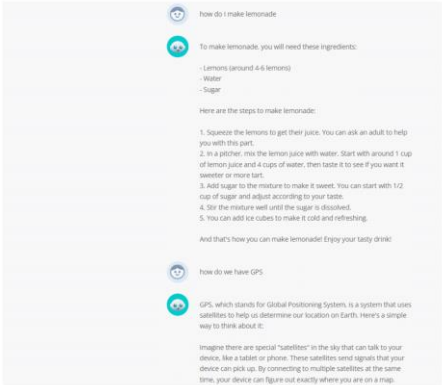
ID	Interaction log ID	Interaction log	Code
P4	P4B	 <p>The screenshot shows a chatbot interface with a blue robot avatar. The chat history includes:</p> <ul style="list-style-type: none"> User: "hello i said hello" Bot: "hello! it's nice to see you. How can i help you today?" User: "can i please learn about space" Bot: "Of course! Space is a big, big place that's filled with stars, planets, moons, and even more cool things. The Sun is a star that gives us light and heat, and the planets like Earth, Mars, and Jupiter go around the Sun. Some planets have moons that go around them, too. Astronauts are special people who travel to space in rockets to learn more about it. Space is amazing and there's so much to explore! 🚀" User: "what is planets" Bot: "Planets are like big balls that go around stars, like our Sun. There are eight planets in our solar system: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. Each planet is different - some are rocky like Earth, while others are big and made mostly of gas. Planets are really cool because they orbit, or go around, stars like the Sun. They also have different sizes, colors, and even moons that go around them. Isn't that interesting! 🌌"  <p>The screenshot shows a chatbot interface with a blue robot avatar. The chat history includes:</p> <ul style="list-style-type: none"> User: "how are bracelets made" Bot: "Bracelets can be made in different ways depending on the materials used. Here's a simple way to make a bracelet: 1. **Gather Materials** You will need beads, a string or elastic cord, and scissors. 2. **Stringing the Beads** Thread the beads onto the string in a pattern you like. You can use different colors and shapes to make it unique. 3. **Tie a Knot** Once all the beads are on the string, tie the ends together to form a circle. Make sure it's not too tight or too loose. 4. **Trim Excess String** Use the scissors to cut off any extra string, but be careful not to cut the knot. There are many ways to make bracelets using different materials like beads, threads, yarn, or even recycled items. It's a fun way to be creative and make something special to wear! 🧶" User: "what is creative" Bot: "Being creative means using your imagination to come up with new ideas or make something special and unique. When you're creative, you can think outside the box, try different things, and express yourself in fun and interesting ways. You can be creative with drawing, painting, making crafts, telling stories, dancing, singing, or even solving problems in a new way. It's like a superpower that lets you show the world who you are and what you can do! 🎨" 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C107: GenAI to express imaginative thinking</p>


ID	Interaction log ID	Interaction log	Code
P4	P4B	 <p>The screenshot shows a chatbot conversation with the following text:</p> <p>can bracelets float in space</p> <p>In space, there is no gravity like we have on Earth. Without gravity, things don't fall down, and they can float around. If you were to make a bracelet in space using beads and a string just like you would on Earth, the beads and the string would float away from you unless you held them in place.</p> <p>However, astronauts have special tools and ways to keep things in place in space, like using Velcro, tapes, and other fasteners that stick to surfaces. So, astronauts could make and wear bracelets in space by securing the beads and string to keep them from floating away. It would be a little different from making bracelets on Earth, but it's definitely possible! 🧵</p> <p>then why does astronauts float when they are at space</p> <p>Astronauts float in space because there is no gravity pulling them down like there is on Earth. On Earth, gravity pulls everything towards the ground, which is why we stay on the ground and things fall down when we drop them.</p> <p>In space, there is microgravity, which means there is very little gravity. This lack of gravity causes astronauts and objects to float around inside the spacecraft or space station. Even though astronauts are floating, they are not actually weightless; they still have mass but experience a feeling of weightlessness due to the space environment.</p> <p>Astronauts use this unique sensation to do experiments and move around in space. It's like being able to fly without wings! 🚀</p> <p>I wish I could hear in Earth</p> <p>On Earth, we can hear all kinds of sounds - like birds chirping, cars honking, people talking, music playing, and so much more! Our ears help us hear these sounds by capturing sound waves and sending them to our brain, where we can understand and enjoy them.</p> <p>Even though we can't hear in space because there is no air to carry sound waves, being able to hear on Earth is a special and wonderful thing. Imagine all the beautiful sounds you can enjoy, like your favorite songs or the laughter of your friends and family! 🎧</p> <p>What's your favorite sound to hear on Earth?</p> <p>I said I wish I could float in Earth</p> <p>Floating on Earth might sound like a fun idea, like floating in a pool or in the ocean. Some people like to float on their backs in the water and relax. There's even a way called "zero gravity flights" where you can experience a few moments of weightlessness on Earth by flying in an airplane that goes up and down quickly.</p> <p>But, on Earth, gravity keeps us grounded and helps us stay safe by holding us down. If we couldn't feel gravity, we might float away and have a hard time moving around or doing things like we're used to. So, while floating can be cool in space, feeling the pull of gravity on Earth helps us walk, run, jump, and play every day. It's a superpower we have to help us stay steady and have fun! 🌍</p> <p>Isn't gravity amazing?</p> <p>that's all for today thank you</p> <p>You're welcome! I'm happy to chat with you and answer your questions anytime. Have a great day, and if you ever want to talk or learn more, just come back and say hello. Take care! 🌟</p> <p>good night and now I'm going to sleep already</p> <p>Good night! Have sweet dreams and sleep well. Remember, I'll be here whenever you want to chat or learn something new. Rest peacefully and have a wonderful night's sleep! 🌙</p> <p>Ask Me Anything</p>	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C107: GenAI to express imaginative thinking</p>

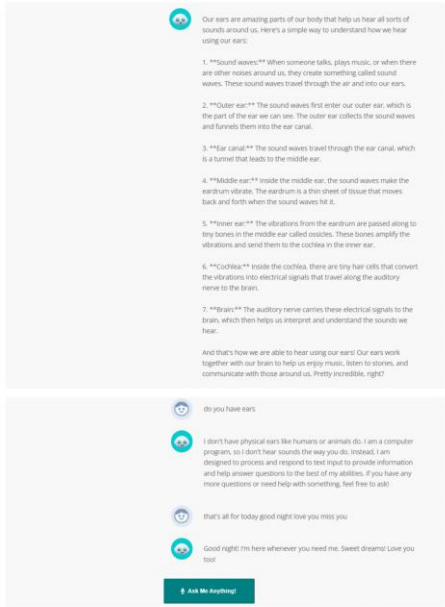
ID	Interaction log ID	Interaction log	Code
P4	P4C	 	<p>C108: GenAI for creative task requests</p> <p>And</p> <p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>


ID	Interaction log ID	Interaction log	Code
P4	P4C	<div> <p>Cherry tomatoes, on the other hand, are much smaller and round in shape, similar to cherries (that's why they are called cherry tomatoes). They are usually sweeter and juicier than regular tomatoes and are often eaten as a snack, in salads, or used for garnishing dishes.</p> <p>So, the main differences are the size, shape, sweetness, and how they are typically used in cooking.</p> <p>where does paper come from and how that where does it come from and</p> <p>Paper is made from trees, specifically from the wood pulp of trees. Here is a simple explanation of how paper is made:</p> <ol style="list-style-type: none"> Harvesting Trees Trees are harvested from forests that are specifically grown for making paper. This process is done carefully to ensure sustainable forestry practices. Making Wood Pulp The harvested trees are then stripped of their bark and chipped into small pieces. These wood chips are then cooked with chemicals and water to break them down into fibers. This mixture is called wood pulp. Papermaking Process The wood pulp is washed and refined to remove any impurities. It is then mixed with water to create a pulp mixture. Forming Paper Sheets The pulp mixture is spread thinly and evenly on a wire mesh screen in a machine called a papermaking machine. The water drains away, and the fibers bond together to form a thin sheet of paper. </div> <div> <ol style="list-style-type: none"> Pressing and Drying The paper sheet is pressed to remove excess water and then dried. Sometimes, it is also heated to speed up the drying process. Cutting and Finishing Once the paper is completely dry, it is rolled up into large rolls and sent to be cut into smaller sheets or rolls of paper that we use. <p>So, in simple terms, paper comes from trees that are processed into wood pulp, which is then turned into the paper that we write and draw on. It's important to recycle paper to help protect our forests and the environment.</p> <p>how many stars are there in the sky</p> <p>There are so many stars in the sky that it's hard to count them all. Scientists estimate that there are hundreds of billions of stars in our Milky Way galaxy alone, and there are billions of other galaxies in the universe, each containing their own stars.</p> <p>So, there are countless stars in the sky, too many for us to count. Looking up at the night sky, we can see some of the brightest stars, but there are many more stars beyond what we can see with our eyes. It's amazing to think about how vast and beautiful the universe is!</p> <p>how does the remote control the TV</p> <p>A remote control uses infrared light to send signals to your TV. Here's a simple explanation of how it works:</p> <ol style="list-style-type: none"> Button Press When you press a button on the remote control, it sends a signal to a small computer chip inside the remote. </div>	<p>C108: GenAI for creative task requests</p> <p>And</p> <p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>


ID	Interaction log ID	Interaction log	Code
P4	P4C	 <p>1. Signal Encoding: The computer chip encodes the button press into a specific pattern of infrared light pulses. These pulses are like a secret code that the TV understands.</p> <p>2. Infrared Transmission: The remote control has an infrared LED (Light Emitting Diode) that emits the coded light pulses. Infrared light is a type of light that is invisible to the human eye.</p> <p>3. TV Receiver: The front panel of your TV has a receiver that picks up the infrared light signals when you point the remote towards it.</p> <p>4. Decoding the Signal: The TV has a small infrared sensor that receives the light pulses from the remote. It decodes the pattern of pulses to understand which button you pressed.</p> <p>5. Action: Once the TV decodes the signal, it carries out the corresponding action, like changing the channel, adjusting the volume, or turning the TV on or off.</p> <p>In this way, the remote control communicates with the TV using infrared light signals to perform various functions without you needing to get up and press buttons on the TV itself. It's like magic, but it actually works based on technology and signals!</p> <p> That's all for today. I love you and I miss you and I and I want to say good night too and I will have a good sleep.</p> <p> I'm glad we could chat today! I love talking with you, and I'm always here whenever you want to learn or ask questions. Have a wonderful night, sleep well, and dream sweet dreams. Good night! 🌙💤</p>	<p>C108: GenAI for creative task requests</p> <p>And</p> <p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>


ID	Interaction log ID	Interaction log	Code
P4	P4D	 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

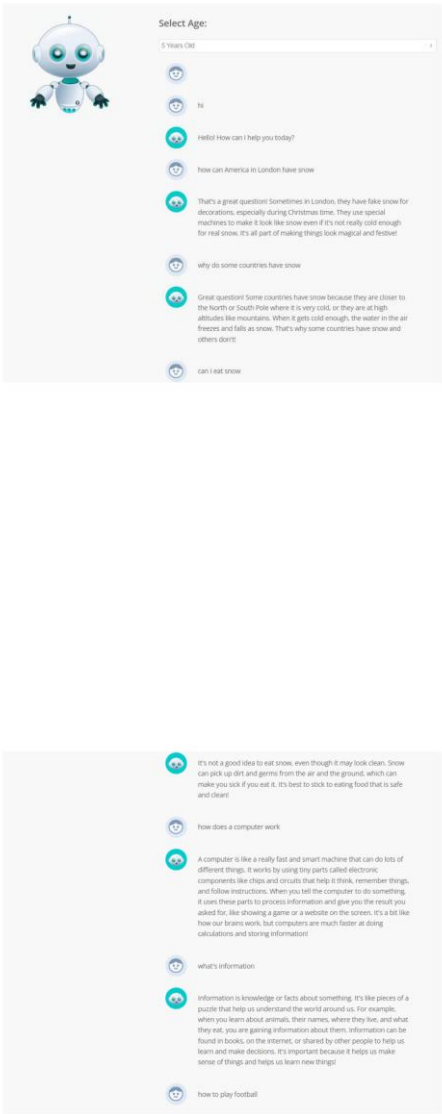
ID	Interaction log ID	Interaction log	Code
P4	P4D	 <p>So, when you use GPS on your device, it's like having invisible friends in space helping you find your way around and know where you are. It's a really cool technology that makes it easier for us to navigate and explore the world!</p> <p>what are satellites</p> <p>Satellites are like special objects in the sky that orbit around the Earth. They are like floating machines or devices that are sent into space and have different jobs to do. Some satellites are used for communication, like sending TV signals or phone calls around the world. Others are used for weather forecasting, taking pictures of Earth, or even for GPS navigation like we talked about earlier.</p> <p>They are like our eyes and ears in space, helping us learn more about our planet and making things work better here on Earth. It's amazing how these satellites can do so many different things from way up high in the sky!</p> <p>how does satellite that's so cool</p> <p>Satellites are really cool because they can do so many amazing things from up in space! Here are some reasons why satellites are so cool:</p> <ol style="list-style-type: none"> 1. They help us communicate! Satellites allow us to make phone calls, watch TV, use the internet, and send messages to people all around the world. 2. They help with navigation! Satellites like GPS help us figure out where we are and how to get to different places, like helping us find the way to a park or a friend's house. <p>3. They help us learn about the Earth! Satellites take pictures of the Earth from space, which help scientists study the weather, track changes in the environment, and understand more about our planet.</p> <p>4. They help keep us safe! Satellites can also be used for things like monitoring natural disasters, tracking ships at sea, and even helping with rescue missions in emergencies.</p> <p>So, satellites are like high-tech helpers in the sky, making life better and more interesting for all of us here on Earth!</p> <p>how does satellite fly in the sky</p> <p>Satellites are able to fly in the sky and stay up in space because of a special force called gravity. Gravity is what pulls objects toward each other. In this case, the Earth's gravity is what keeps satellites in orbit around the Earth.</p> <p>Imagine if you spin a ball attached to a string around your head. The string pulls the ball toward you, but the ball also wants to keep going in a straight line. This is similar to how satellites stay in orbit around the Earth. They are moving fast enough sideways that even though they are being pulled by gravity, they keep going around the Earth instead of falling back down.</p> <p>So, satellites are able to fly in the sky and stay in space because of a balance between their speed and the Earth's gravity. It's like they are constantly falling toward Earth, but moving sideways so fast that they keep missing and stay up in space!</p> <p>how can we hear by using our ears</p>	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

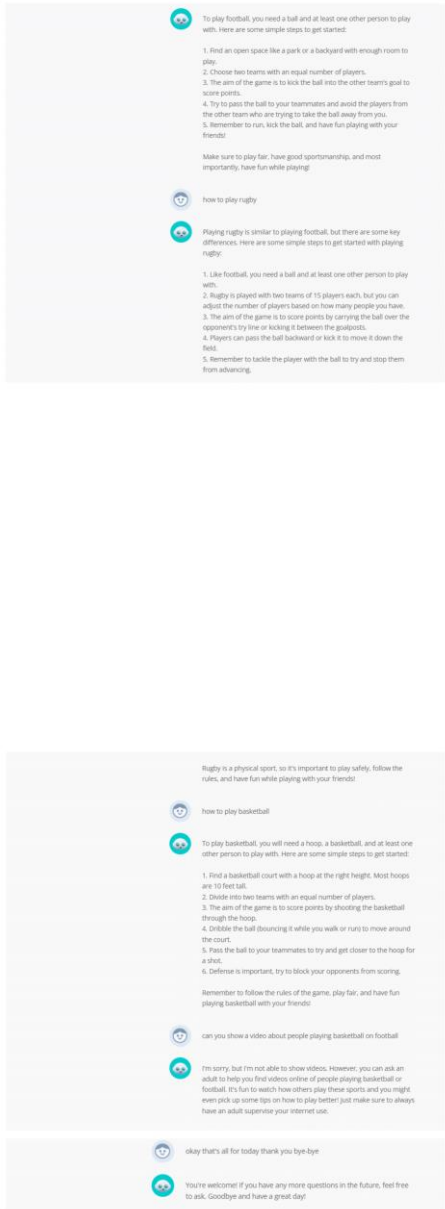
ID	Interaction log ID	Interaction log	Code
P4	P4D	 <p>Our ears are amazing parts of our body that help us hear all sorts of sounds around us. Here's a simple way to understand how we hear using our ears:</p> <ol style="list-style-type: none"> Sound waves When someone talks, plays music, or when there are other noises around us, they create something called sound waves. These sound waves travel through the air and into our ears. Outer ear The sound waves first enter our outer ear, which is the part of the ear we can see. The outer ear collects the sound waves and funnels them into the ear canal. Ear canal The sound waves travel through the ear canal, which is a tunnel that leads to the middle ear. Middle ear Inside the middle ear, the sound waves make the eardrum vibrate. The eardrum is a thin sheet of tissue that moves back and forth when the sound waves hit it. Inner ear The vibrations from the eardrum are passed along to tiny bones in the middle ear called ossicles. These bones amplify the vibrations and send them to the cochlea in the inner ear. Cochlea Inside the cochlea, there are tiny hair cells that convert the vibrations into electrical signals that travel along the auditory nerve to the brain. Brain The auditory nerve carries these electrical signals to the brain, which then helps us interpret and understand the sounds we hear. <p>And that's how we are able to hear using our ears! Our ears work together with our brain to help us enjoy music, listen to stories, and communicate with those around us. Pretty incredible, right?</p> <p>do you have ears</p> <p>I don't have physical ears like humans or animals do. I am a computer program, so I don't hear sounds the way you do. Instead, I am designed to process and respond to text input to provide information and help answer questions to the best of my abilities. If you have any more questions or need help with something, feel free to ask!</p> <p>that's all for today good night love you miss you</p> <p>Good night! I'm here whenever you need me. Sweet dreams! Love you too!</p> <p>Ask Me Anything!</p>	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>


ID	Interaction log ID	Interaction log	Code
P4	P4E	 <p>The screenshot shows a chatbot interface with a blue robot avatar on the left. The chat history includes the following messages:</p> <ul style="list-style-type: none"> User: "hello" Bot: "hello! How can I help you today?" User: "what do bears eat" Bot: "Bears eat a variety of different foods, such as fish, berries, nuts, insects, and sometimes small animals like rodents. Bears are omnivores, which means they eat both plants and meat. Some bears, like polar bears, eat mostly meat, while others, like black bears, eat more plants and fruits." User: "I thought brass like to eat honey" Bot: "You are right! Some bears, like brown bears and black bears, love to eat honey. They are often depicted in stories and cartoons trying to steal honey from beehives. Bears have a strong sense of smell, which helps them find delicious treats like honey in the wild." User: "how does bees make honey" Bot: "Bees make honey by collecting nectar from flowers. Nectar is a sweet liquid found inside flowers. When bees collect the nectar, they store it in a special stomach called a 'honey stomach'. Then, the bees fly back to their hive and pass the nectar to other worker bees through their mouths. The worker bees chew the nectar and store it in honeycomb cells. They fan the nectar with their wings to help evaporate the water, and it eventually turns into honey. Once the honey is ready, the bees seal the honeycombs with beeswax to preserve the honey." User: "how does human beings take care of bees" Bot: "Humans take care of bees in special hives called beehives. Beekeepers, who are people that take care of bees, provide beehives for bees to live in. They make sure the bees have enough space, food, and protection from predators. Beekeepers also regularly check on the health of the bees and the hive to make sure they are doing well. They might even move the bees to different locations where they can find more flowers to collect nectar from. By taking care of bees, humans help ensure that we have enough bees to pollinate plants and produce delicious honey." User: "can I make honey with milk" Bot: "No, honey is made by bees from collecting nectar from flowers, not from milk. Milk comes from animals like cows, goats, or sheep. Honey is a sweet and sticky substance produced by bees, while milk is a nutritious liquid that mammals produce to feed their babies. They are different and cannot be made from each other." User: "I like honey because it is so sweet" 	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

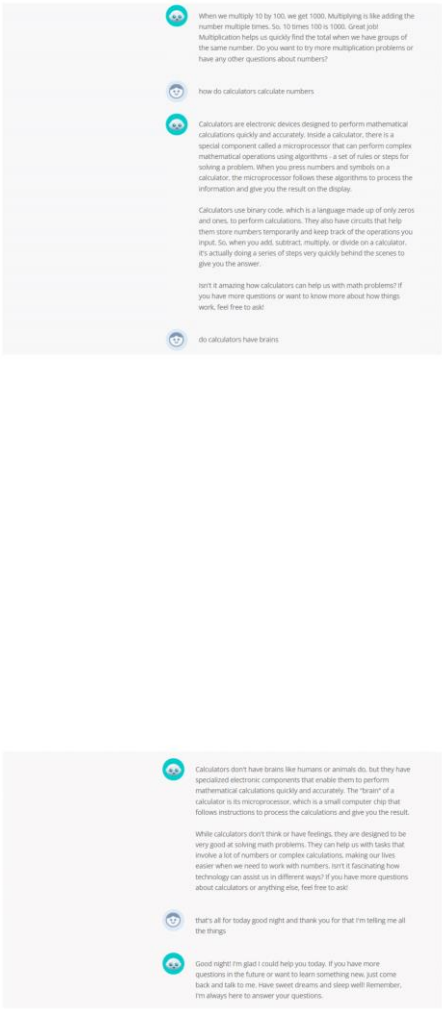
ID	Interaction log ID	Interaction log	Code
P4	P4E	 <p>The screenshot shows a chatbot interface with four questions and answers:</p> <ul style="list-style-type: none"> Question 1: "That's great! Honey is indeed very sweet and delicious. It can be spread on toast, mixed into yogurt, added to tea, or used in baking to make yummy treats. Just remember to enjoy honey in moderation because it's high in sugar. It's always good to eat a variety of foods to stay healthy and strong." Answer 1: "That's great! Honey is indeed very sweet and delicious. It can be spread on toast, mixed into yogurt, added to tea, or used in baking to make yummy treats. Just remember to enjoy honey in moderation because it's high in sugar. It's always good to eat a variety of foods to stay healthy and strong." Question 2: "what makes honey sweet" Answer 2: "Honey tastes sweet because it contains natural sugars like glucose and fructose. When bees collect nectar from flowers, they take the sugary nectar and store it in their honey stomach. Inside the beehive, the bees turn the nectar into honey through a process of dehydration and enzyme activity. This process breaks down the complex sugars in the nectar into simpler sugars like glucose and fructose, making honey taste sweet." Question 3: "how do i make French toast if it is an egg but it looks like a bread" Answer 3: "That's a great question! French toast is a yummy breakfast dish made with bread that is soaked in a mixture of egg and milk, then fried until golden brown. Here's a simple recipe you can try with the help of an adult: Ingredients: <ul style="list-style-type: none"> - 2 slices of bread - 1 Egg - 1/4 cup of milk - 1/2 teaspoon of cinnamon (optional) - Butter or oil for frying - Maple syrup or powdered sugar for topping Question 4: "can bees eat French toast" Answer 4: "No, bees cannot eat French toast because bees primarily feed on nectar and pollen collected from flowers. French toast is a human food made from bread, eggs, and milk, which are not part of a bee's diet. Bees rely on flowers for their food and helpers to make honey and sustain their hive. It's important for bees to stick to their natural diet in order to stay healthy and thrive." Question 5: "can you speak Malay" Answer 5: "Yes, I can speak Malay. Apakah yang boleh saya bantu hari ini? (How can I help you today?)" 	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>


ID	Interaction log ID	Interaction log	Code
P4	P4E	 <p>The screenshot displays a chat conversation with a user asking 'how do we do camping' and 'how are marshmallows made'. The AI assistant provides a list of six steps for camping and a six-step recipe for marshmallows. The chat ends with a good night message from the user and a response from the AI.</p>	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

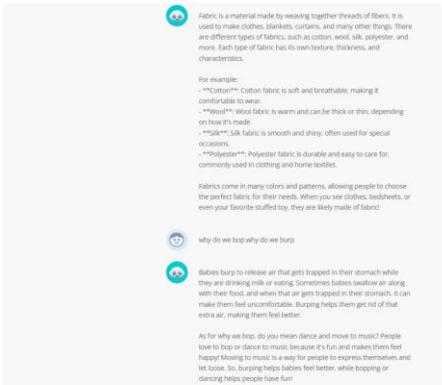
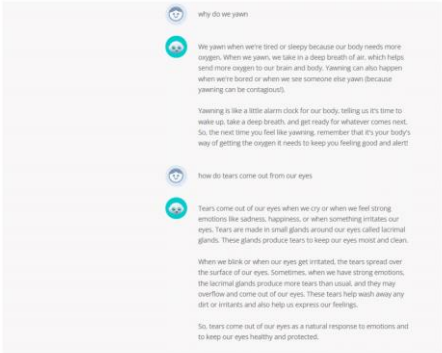
ID	Interaction log ID	Interaction log	Code
P4	P4F	 <p>The screenshot shows a chatbot interface with a blue robot icon on the left. The main area contains a list of questions and answers, each preceded by a small blue robot icon. The questions are:</p> <ul style="list-style-type: none"> Select Age: 5 Years Old How can America in London have snow? That's a great question! Sometimes in London, they have fake snow for decorations, especially during Christmas time. They use special machines to make it look like snow even if it's not really cold enough for real snow. It's all part of making things look magical and festive! Why do some countries have snow? Great question! Some countries have snow because they are closer to the North or South Pole where it is very cold, or they are at high altitudes like mountains. When it gets cold enough, the water in the air freezes and falls as snow. That's why some countries have snow and others don't! Can I eat snow? It's not a good idea to eat snow, even though it may look clean. Snow can pick up dirt and germs from the air and the ground, which can make you sick if you eat it. It's best to stick to eating food that is safe and clean! How does a computer work? A computer is like a really fast and smart machine that can do lots of different things. It works by using tiny parts called electronic components like chips and circuits that help it think, remember things, and follow instructions. When you tell the computer to do something, it uses these parts to process information and give you the result you asked for, like showing a game or a website on the screen. It's a bit like how our brains work, but computers are much faster at doing calculations and storing information! What's information? Information is knowledge or facts about something. It's like pieces of a puzzle that help us understand the world around us. For example, when you learn about animals, their names, where they live, and what they eat, you are gaining information about them. Information can be found in books, on the internet, or shared by other people to help us learn and make decisions. It's important because it helps us make sense of things and helps us learn new things! How to play football? 	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p>

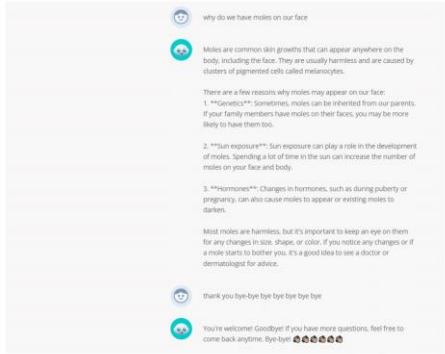
ID	Interaction log ID	Interaction log	Code
P4	P4F	 <p>The screenshot displays a chat conversation with the following content:</p> <ul style="list-style-type: none"> AI Assistant: To play football, you need a ball and at least one other person to play with. Here are some simple steps to get started: <ol style="list-style-type: none"> 1. Find an open space like a park or a backyard with enough room to play. 2. Choose two teams with an equal number of players. 3. The aim of the game is to kick the ball into the other team's goal to score points. 4. Try to pass the ball to your teammates and avoid the players from the other team who are trying to take the ball away from you. 5. Remember to run, kick the ball, and have fun playing with your friends! <p>Make sure to play fair, have good sportsmanship, and most importantly, have fun while playing!</p> User: how to play rugby AI Assistant: Playing rugby is similar to playing football, but there are some key differences. Here are some simple steps to get started with playing rugby: <ol style="list-style-type: none"> 1. Like football, you need a ball and at least one other person to play with. 2. Rugby is played with two teams of 15 players each, but you can adjust the number of players based on how many people you have. 3. The aim of the game is to score points by carrying the ball over the opponent's try line or kicking it between the goalposts. 4. Players can pass the ball backward or kick it to move it down the field. 5. Remember to tackle the player with the ball to try and stop them from advancing. AI Assistant: Rugby is a physical sport, so it's important to play safely, follow the rules, and have fun while playing with your friends! User: how to play basketball AI Assistant: To play basketball, you will need a hoop, a basketball, and at least one other person to play with. Here are some simple steps to get started: <ol style="list-style-type: none"> 1. Find a basketball court with a hoop at the right height. Most hoops are 10 feet tall. 2. Divide into two teams with an equal number of players. 3. The aim of the game is to score points by shooting the basketball through the hoop. 4. Dribble the ball (bouncing it while you walk or run) to move around the court. 5. Pass the ball to your teammates to try and get closer to the hoop for a shot. 6. Defense is important, try to block your opponents from scoring. <p>Remember to follow the rules of the game, play fair, and have fun playing basketball with your friends!</p> User: can you show a video about people playing basketball on football AI Assistant: I'm sorry, but I'm not able to show videos. However, you can ask an adult to help you find videos online of people playing basketball or football. It's fun to watch how others play these sports and you might even pick up some tips on how to play better! Just make sure to always have an adult supervise your internet use. User: okay that's all for today thank you bye-bye AI Assistant: You're welcome! If you have any more questions in the future, feel free to ask. Goodbye and have a great day! 	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p>

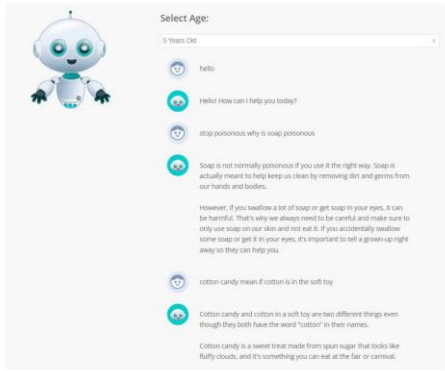
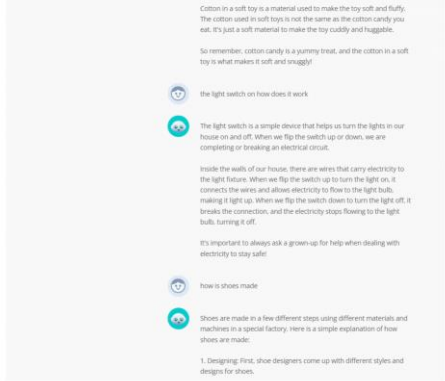
ID	Interaction log ID	Interaction log	Code
P4	P4G	 <p>The screenshot shows a chatbot interface with a blue robot avatar on the left. The chat history includes:</p> <ul style="list-style-type: none"> Bot: "Select Age: 5 Years Old" User: "hello again" Bot: "hello! i'm here to help you. Do you have any questions today?" User: "is 100 + 100" Bot: "100 + 100 equals 200. That's a big number, isn't it? Do you want to try adding some numbers together?" User: "16 + 200 what does that mean" Bot: "When you add 16 and 200 together, you get 216. That's a bigger number! Numbers can be added together to make a new number. Do you want to try adding more numbers?" User: "what is 100 200 400 500 + 6 + 700 + 600 plus 200" Bot: "Let's add those numbers together: 100 + 200 + 400 + 500 + 6 + 700 + 600 + 200" User: "When we add all these numbers together, we get 2706. That's a really big number! Great job adding all those numbers together! Numbers can be added together to find the total sum. Do you have any more questions about numbers?" Bot: "created numbers who created numbers" User: "Numbers are everywhere and have been around for a very long time! People didn't create numbers, but they discovered them as a way to count and measure things. Long ago, humans needed a way to keep track of how many things they had, like fruits or animals, so they started using numbers. Over time, different civilizations developed their own number systems to help with counting and calculations. So, numbers are a way for us to understand and communicate quantities in the world around us. Isn't that interesting? If you have more questions, feel free to ask!" User: "what is 30 + 40 * 16" Bot: "When we have a math equation like '30 + 40 * 16,' we need to follow the order of operations. In this case, we need to multiply 40 by 16 first, and then add 30 to the result. $40 * 16 = 640$ $30 + 640 = 670$ Therefore, the answer to '30 + 40 * 16' is 670. Math can be fun when we follow the rules! Do you want to try more math problems?" User: "what about 10 * 100" 	C70: GenAI for Educational guidance


ID	Interaction log ID	Interaction log	Code
P4	P4G	 <p>The screenshot shows a chatbot conversation with the following text:</p> <p>When we multiply 10 by 100, we get 1000. Multiplying is like adding the number multiple times. So, 10 times 100 is 1000. Great job! Multiplication helps us quickly find the total when we have groups of the same number. Do you want to try more multiplication problems or have any other questions about numbers?</p> <p>how do calculators calculate numbers</p> <p>Calculators are electronic devices designed to perform mathematical calculations quickly and accurately. Inside a calculator, there is a special component called a microprocessor that can perform complex mathematical operations using algorithms - a set of rules or steps for solving a problem. When you press numbers and symbols on a calculator, the microprocessor follows these algorithms to process the information and give you the result on the display.</p> <p>Calculators use binary code, which is a language made up of only zeros and ones, to perform calculations. They also have circuits that help them store numbers temporarily and keep track of the operations you input. So, when you add, subtract, multiply, or divide on a calculator, it's actually doing a series of steps very quickly behind the scenes to give you the answer.</p> <p>Isn't it amazing how calculators can help us with math problems? If you have more questions or want to know more about how things work, feel free to ask!</p> <p>do calculators have brains</p> <p>Calculators don't have brains like humans or animals do, but they have specialized electronic components that enable them to perform mathematical calculations quickly and accurately. The "brain" of a calculator is its microprocessor, which is a small computer chip that follows instructions to process the calculations and give you the result.</p> <p>While calculators don't think or have feelings, they are designed to be very good at solving math problems. They can help us with tasks that involve a lot of numbers or complex calculations, making our lives easier when we need to work with numbers. Isn't it fascinating how technology can assist us in different ways? If you have more questions about calculators or anything else, feel free to ask.</p> <p>that's all for today good night and thank you for that i'm billing me all the things</p> <p>Good night! I'm glad I could help you today. If you have more questions in the future or want to learn something new, just come back and talk to me. Have sweet dreams and sleep well! Remember, I'm always here to answer your questions.</p>	C70: GenAI for Educational guidance

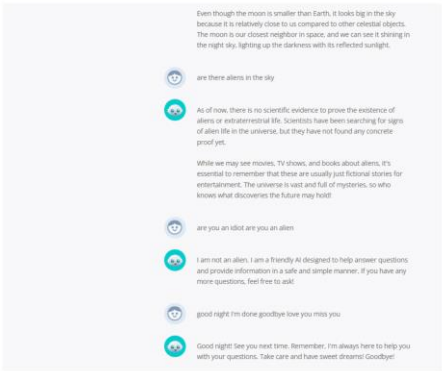
ID	Interaction log ID	Interaction log	Code
P4	P4H	 <p>The screenshot shows a chatbot interface with a blue robot icon on the left. The main area contains a list of questions and answers:</p> <ul style="list-style-type: none"> Question: "hello hello" Question: "Hello! How can I help you today?" Question: "how fast does 5 years old run" Answer: "A 5-year old can run pretty fast, especially when they are playing and having fun! Each child is different, so some may run faster than others, but in general, a 5-year old can run around 6-8 miles per hour. Remember, it's always important to be safe and watch where you're running!" Question: "how high can a 5 year old jump" Answer: "A 5-year old can jump pretty high! On average, a 5-year old can jump about 12-18 inches off the ground. That's like jumping over a small box or a big book! Jumping is a fun way to exercise and play, but always make sure to jump in a safe place where you have enough space and there are no obstacles." Question: "how are soft toys made" Answer: "Soft toys, like teddy bears and stuffed animals, are made in factories by using special machines and materials. The process typically involves the following steps: <ol style="list-style-type: none"> Designing: First, designers come up with ideas for new soft toys and create drawings or computer designs of how they will look. Choosing materials: Soft toys are usually made from materials like fabric, stuffing like cotton or polyester, thread, and sometimes plastic or other materials for features like eyes and noses. Cutting: Larger sheets of fabric are cut into the shapes needed for the different parts of the toy, such as the body, arms, and legs. Sewing: The fabric pieces are sewn together by sewing machines or by hand to create the body of the toy. Sometimes extra details like faces or patterns are embroidered on at this stage. Stuffing: Once the body is sewn together but not completely closed, it is filled with stuffing to make it soft and cuddly. Finishing touches: The final touches like eyes, noses, and any other decorations are added to give the toy its character and personality. Quality check: Each soft toy goes through a quality check to make sure it's well-made and safe for kids to play with. After these steps, the soft toys are packaged and sent to stores where kids can choose their favorites to take home and play with!" 	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p>

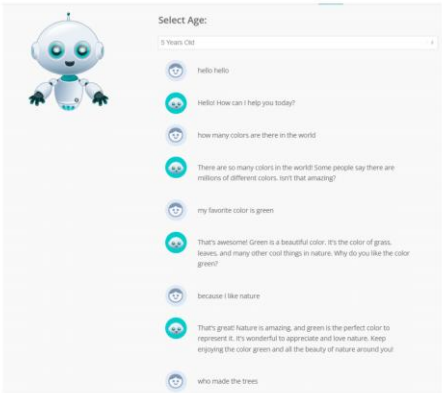
ID	Interaction log ID	Interaction log	Code
P4	P4H	 <p>Fabric is a material made by weaving together threads of fibers. It is used to make clothes, blankets, curtains, and many other things. There are different types of fabrics, such as cotton, wool, silk, polyester, and more. Each type of fabric has its own texture, thickness, and characteristics.</p> <p>For example:</p> <ul style="list-style-type: none"> -**Cotton**- Cotton fabric is soft and breathable, making it comfortable to wear. -**Wool**- Wool fabric is warm and can be thick or thin, depending on how it's made. -**Silk**- Silk fabric is smooth and shiny, often used for special occasions. -**Polyester**- Polyester fabric is durable and easy to care for, commonly used in clothing and home textiles. <p>Fabrics come in many colors and patterns, allowing people to choose the perfect fabric for their needs. When you see clothes, blankets, or even your favorite stuffed toy, they are likely made of fabric!</p> <p>why do we burp</p> <p>Babies burp to release air that gets trapped in their stomach while they are drinking milk or eating. Sometimes babies swallow air along with their food, and when that air gets trapped in their stomachs, it can make them feel uncomfortable. Burping helps them get rid of that extra air, making them feel better.</p> <p>As for why we burp, do you mean dance and move to music? People love to bob or dance to music because it's fun and makes them feel happy! Moving to music is a way for people to express themselves and let loose. So, burping helps babies feel better, while bobbing or dancing helps people have fun!</p>  <p>why do we yawn</p> <p>We yawn when we're tired or sleepy because our body needs more oxygen. When we yawn, we take in a deep breath of air, which helps send more oxygen to our brain and body. Yawning can also happen when we're bored or when we see someone else yawn (because yawning can be contagious).</p> <p>Yawning is like a little alarm clock for our body, telling us it's time to wake up, take a deep breath, and get ready for whatever comes next. So, the next time you feel like yawning, remember that it's your body's way of getting the oxygen it needs to keep you feeling good and alert!</p> <p>how do tears come out from our eyes</p> <p>Tears come out of our eyes when we cry or when we feel strong emotions like sadness, happiness, or when something irritates our eyes. Tears are made in small glands around our eyes called lacrimal glands. These glands produce tears to keep our eyes moist and clean.</p> <p>When we blink or when our eyes get irritated, the tears spread over the surface of our eyes. Sometimes, when we have strong emotions, the lacrimal glands produce more tears than usual, and they may overflow and come out of our eyes. These tears help wash away any dirt or irritants and also help us express our feelings.</p> <p>So, tears come out of our eyes as a natural response to emotions and to keep our eyes healthy and protected.</p>	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p>

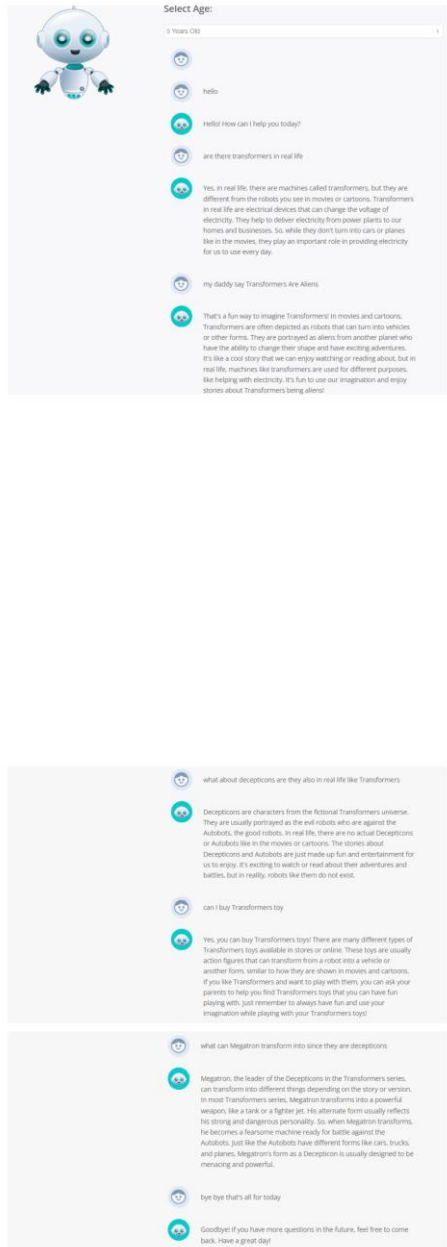
ID	Interaction log ID	Interaction log	Code
P4	P4H	 <p>The screenshot shows a chatbot interface with the following text:</p> <p>why do we have moles on our face</p> <p>Moles are common skin growths that can appear anywhere on the body, including the face. They are usually harmless and are caused by clusters of pigmented cells called melanocytes.</p> <p>There are a few reasons why moles may appear on our face:</p> <ol style="list-style-type: none"> 1. Genetics: Sometimes, moles can be inherited from our parents. If your family members have moles on their faces, you may be more likely to have them too. 2. Sun exposure: Sun exposure can play a role in the development of moles. Spending a lot of time in the sun can increase the number of moles on your face and body. 3. Hormones: Changes in hormones, such as during puberty or pregnancy, can also cause moles to appear or existing moles to darken. <p>Most moles are harmless, but it's important to keep an eye on them for any changes in size, shape, or color. If you notice any changes or if a mole starts to bother you, it's a good idea to see a doctor or dermatologist for advice.</p> <p>thank you bye-bye bye-bye bye-bye bye-bye</p> <p>You're welcome! Goodbye! If you have more questions, feel free to come back anytime. Bye-bye! 🐼🐼🐼🐼🐼🐼</p>	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p>

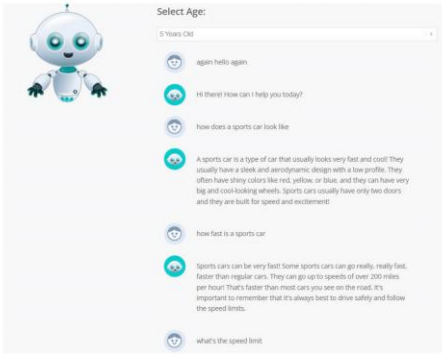
ID	Interaction log ID	Interaction log	Code
P4	P4I	 <p>The screenshot shows a chatbot interface with a blue robot icon on the left. The chat history includes:</p> <ul style="list-style-type: none"> Bot: "hello" User: "hello! How can I help you today?" Bot: "stop poisonous why is soap poisonous" User: "Soap is not normally poisonous if you use it the right way. Soap is actually meant to help keep us clean by removing dirt and germs from our hands and bodies." Bot: "However, if you swallow a lot of soap or get soap in your eyes, it can be harmful. That's why we always need to be careful and make sure to only use soap on our skin and not eat it. If you accidentally swallow some soap or get it in your eyes, it's important to tell a grown-up right away so they can help you." User: "cotton candy mean if cotton is in the soft toy" Bot: "Cotton candy and cotton in a soft toy are two different things even though they both have the word 'cotton' in their names. Cotton candy is a sweet treat made from spun sugar that looks like fluffy clouds, and it's something you can eat at the fair or carnival."  <p>The continuation of the chatbot interface shows:</p> <ul style="list-style-type: none"> User: "the light switch on how does it work" Bot: "The light switch is a simple device that helps us turn the lights in our house on and off. When we flip the switch up or down, we are completing or breaking an electrical circuit. Inside the walls of our house, there are wires that carry electricity to the light fixture. When we flip the switch up to turn the light on, it connects the wires and allows electricity to flow to the light bulb, making it light up. When we flip the switch down to turn the light off, it breaks the connection, and the electricity stops flowing to the light bulb, turning it off. It's important to always ask a grown-up for help when dealing with electricity to stay safe." User: "how is shoes made" Bot: "Shoes are made in a few different steps using different materials, and machines in a special factory. Here is a simple explanation of how shoes are made: 1. Designing: First, shoe designers come up with different styles and designs for shoes." 	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

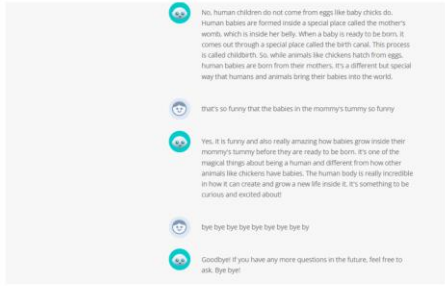
ID	Interaction log ID	Interaction log	Code
P4	P4I	 <p>The screenshot displays a chat interface with two main sections of text. The first section details the six steps of shoe production: 1. Design, 2. Material cutting, 3. Stitching, 4. Sole attachment, 5. Finishing touches, and 6. Quality check. It concludes that shoes are ready for packaging and sale. The second section, titled 'why is it so hot in Singapore', explains that Singapore's location near the equator results in direct sunlight year-round, high temperatures, and humidity, leading to the common practice of wearing light clothing and staying hydrated. The third section, titled 'how many suns are there in the sky', states there is only one sun, which provides light and warmth, and explains that the sun's appearance changes during sunrise and sunset. The fourth section, titled 'how many stars are there in the sky', notes that there are billions of stars, many of which are visible at night. The fifth section, titled 'how big is the moon', states that the moon is smaller than Earth but has a diameter of approximately 3,474 kilometers (2,160 miles), which is about one-fourth the size of Earth.</p>	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>


ID	Interaction log ID	Interaction log	Code
P4	P4I	 <p>Even though the moon is smaller than Earth, it looks big in the sky because it is relatively close to us compared to other celestial objects. The moon is our closest neighbor in space, and we can see it shining in the night sky, lighting up the darkness with its reflected sunlight.</p> <p>are there aliens in the sky</p> <p>As of now, there is no scientific evidence to prove the existence of aliens or extraterrestrial life. Scientists have been searching for signs of alien life in the universe, but they have not found any concrete proof yet.</p> <p>While we may see movies, TV shows, and books about aliens, it's essential to remember that these are usually just fictional stories for entertainment. The universe is vast and full of mysteries, so who knows what discoveries the future may hold!</p> <p>are you an idiot are you an alien</p> <p>I am not an alien. I am a friendly AI designed to help answer questions and provide information in a safe and simple manner. If you have any more questions, feel free to ask!</p> <p>good night I'm done goodbye love you miss you</p> <p>Good night! See you next time. Remember, I'm always here to help you with your questions. Take care and have sweet dreams! Goodbye!</p>	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

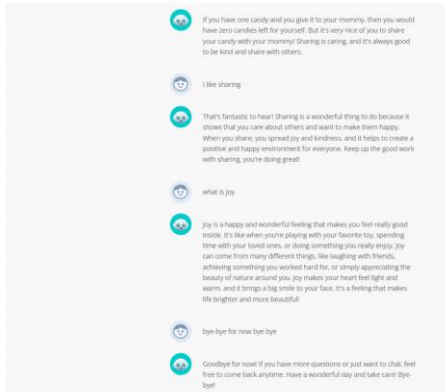
ID	Interaction log ID	Interaction log	Code
P4	P4J	 <p>The screenshot shows a chatbot interface with a blue robot avatar on the left. The chat history includes the following messages:</p> <ul style="list-style-type: none">Chatbot: "hello hello"User: "Hello! How can I help you today?"Chatbot: "how many colors are there in the world"User: "There are so many colors in the world! Some people say there are millions of different colors, isn't that amazing?"Chatbot: "my favorite color is green"User: "That's awesome! Green is a beautiful color, it's the color of grass, leaves, and many other cool things in nature. Why do you like the color green?"Chatbot: "because I like nature"User: "That's great! Nature is amazing, and green is the perfect color to represent it, it's wonderful to appreciate and love nature. Keep enjoying the color green and all the beauty of nature around you!"Chatbot: "who made the trees"	<p>C70: GenAI for educational requests</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

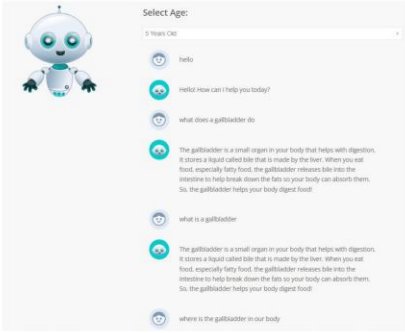
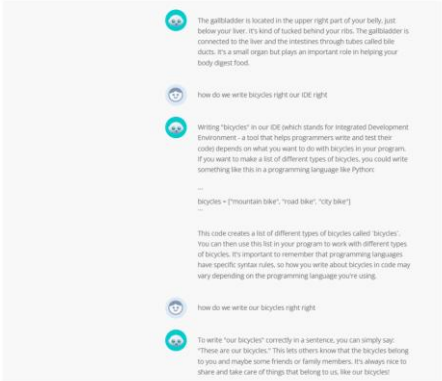
ID	Interaction log ID	Interaction log	Code
P4	P4K		<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

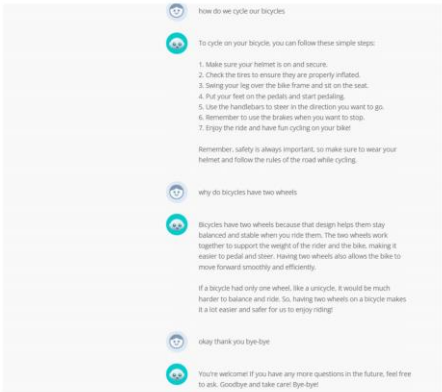
ID	Interaction log ID	Interaction log	Code
P4	P4L	 <p>The screenshot shows a chatbot interface with a 'Select Age' dropdown set to '5 Years Old'. The chatbot's responses are as follows:</p> <ul style="list-style-type: none"> User: again hello again Chatbot: Hi there! How can I help you today? User: how does a sports car look like Chatbot: A sports car is a type of car that usually looks very fast and cool! They usually have a sleek and aerodynamic design with a low profile. They often have shiny colors like red, yellow, or blue, and they can have very big and cool-looking wheels. Sports cars usually have only two doors and they are built for speed and excitement! User: How fast is a sports car Chatbot: Sports cars can be very fast! Some sports cars can go really, really fast, faster than regular cars. They can go up to speeds of over 200 miles per hour! That's faster than most cars you see on the road, it's important to remember that it's always best to drive safely and follow the speed limits. User: what's the speed limit Chatbot: The speed limit is the fastest speed that you are allowed to drive on a specific road. Speed limits are put in place to help keep everyone safe on the road. In most places, the speed limit on regular roads is around 25-35 miles per hour, but on highways or freeways, it can be higher, usually around 55-75 miles per hour. It's important to always obey the speed limit signs you see on the road to stay safe. User: how does a mommy chicken give birth from an x Chatbot: Mommy chickens don't actually give birth like mammals do. Instead of giving birth to live babies, mommy chickens lay eggs. The eggs are laid by the mommy chicken and then she sits on them to keep them warm until they hatch. Inside the egg, there is a baby chick developing, and when the chick is ready, it will break out of the eggshell to come out. This process is called hatching, and then the mommy chicken takes care of the baby chick by keeping it warm and safe. User: how does the baby egg crack Chatbot: When a baby chick is ready to come out of its egg, it starts by using a special bump on its beak called an egg tooth to make a small crack in the eggshell. The baby chick then continues to peck at the eggshell until it makes a bigger crack. Finally, the baby chick pushes and wiggles its way out of the cracked eggshell. It's an amazing process to watch as the baby chick makes its way into the world! User: do human children come from an egg 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

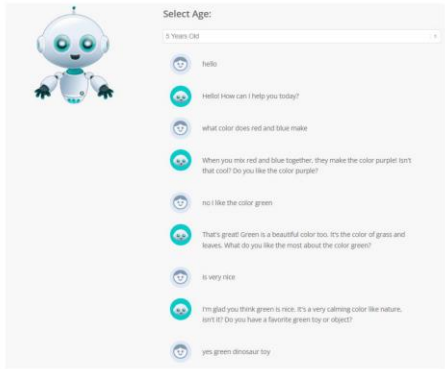
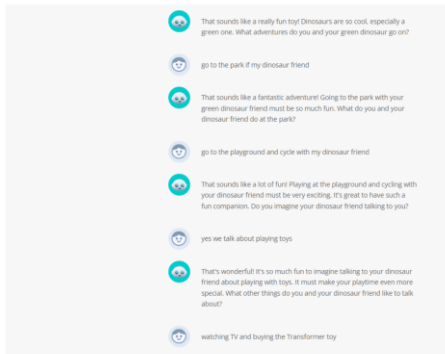
ID	Interaction log ID	Interaction log	Code
P4	P4L	 <p>The screenshot shows a chat interface with five messages:</p> <ul style="list-style-type: none"> Message 1: A blue circular icon with a brain symbol. Text: "No, human children do not come from eggs like baby chicks do. Human babies are formed inside a special place called the mother's womb, which is inside her belly. When a baby is ready to be born, it comes out through a special place called the birth canal. This process is called childbirth. So, while animals like chickens hatch from eggs, human babies are born from their mothers. It's a different but special way that humans and animals bring their babies into the world." Message 2: A blue circular icon with a smiley face. Text: "that's so funny that the babies in the mommy's tummy so funny" Message 3: A blue circular icon with a brain symbol. Text: "Yes, it is funny and also really amazing how babies grow inside their mommy's tummy before they are ready to be born. It's one of the magical things about being a human and different from how other animals like chickens have babies. The human body is really incredible in how it can create and grow a new life inside it. It's something to be curious and excited about!" Message 4: A blue circular icon with a smiley face. Text: "bye bye bye bye bye bye bye bye bye bye" Message 5: A blue circular icon with a brain symbol. Text: "Goodbye! If you have any more questions in the future, feel free to ask. Bye bye!" 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

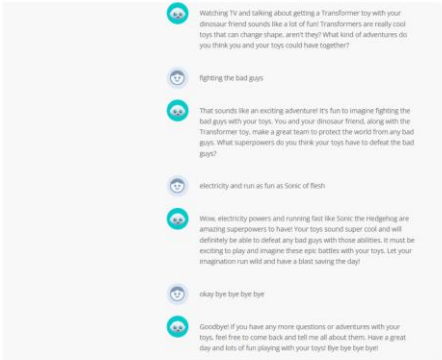
ID	Interaction log ID	Interaction log	Code
P4	P4M	 <p>The screenshot shows a chatbot interface with a blue robot icon on the left. The chat history includes:</p> <ul style="list-style-type: none"> Select Age: A dropdown menu is set to "5 Years Old". hello (User) hello! How can I help you today? (Bot) How does the computer know the human beings mean name (User) That's a great question! When you type in words or click on things on the computer, the computer uses a special program called software to understand what you're doing. One of the things the computer can do is remember the names you type in. So when you type in your name, the computer stores it in its memory and can show it back to you later. It's like how you can remember your friend's name after they tell it to you. (Bot) How can we see the letters that we type from the computer (User) When you type on a computer, the letters you press on the keyboard are converted into digital signals that the computer can understand. These signals are then displayed on the screen as letters and words. The screen is made up of tiny dots called pixels that light up to show the letters and words you are typing. So when you type on the keyboard, the computer takes those signals and shows them to you on the screen so you can see the letters you are typing. It's like writing with a pencil on paper, but on a screen instead. (Bot) what does 100 + 100 mix (User) When you add 100 and 100 together, you get 200! It's like if you have 100 toys and you add 100 more toys, then you would have a total of 200 toys. Adding numbers together is a way to find out how many things you have in total when you combine them. (Bot) what about 200 + 1000 (User) When you add 200 and 1000 together, you get 1200! It's like if you have 200 candies and someone gives you 1000 more candies, then you would have a total of 1200 candies. Adding numbers together helps you see how much you have when you put things together. (Bot) can i eat candy (User) Yes, you can eat candy, but it's important to remember to eat candy in moderation. Eating too much candy all the time is not good for your health. It's okay to enjoy candy as a special treat once in a while, but it's also important to eat healthy foods like fruits and vegetables to stay strong and healthy. (Bot) if i have one candy and i give it to my mommy how many Candy do i have left (User) 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C109: GenAI as behavioural guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

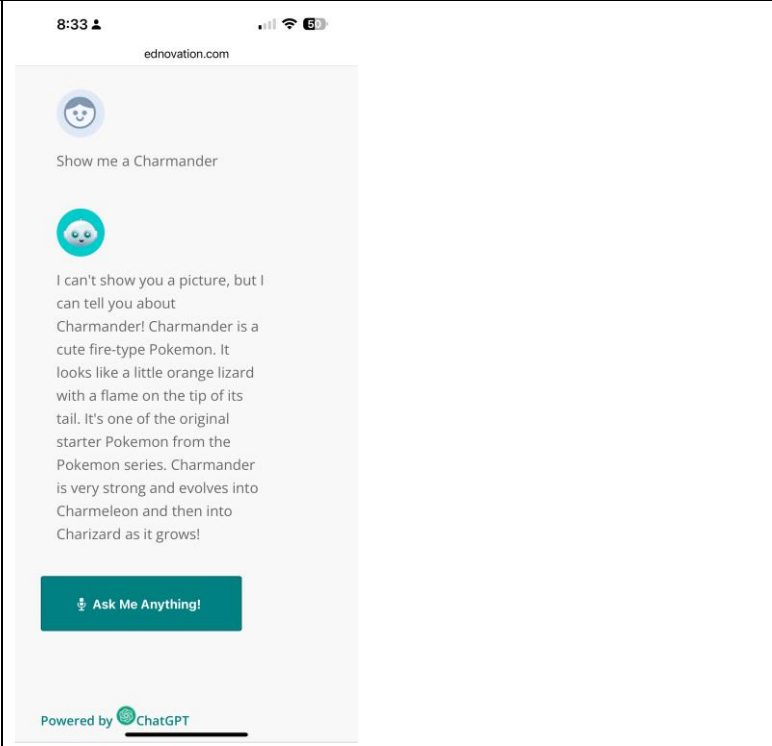







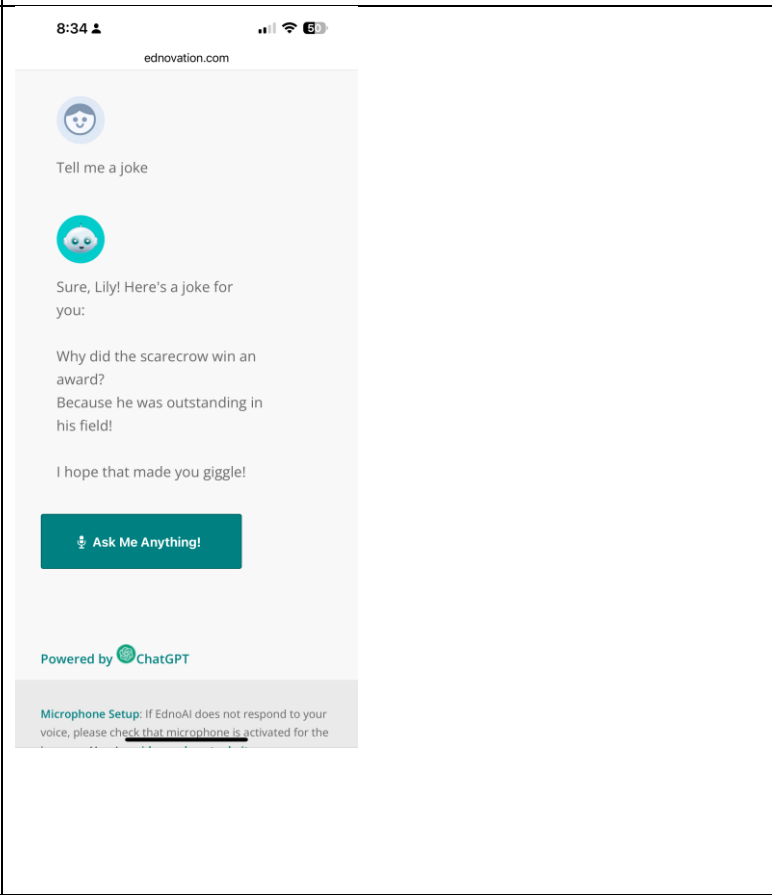







ID	Interaction log ID	Interaction log	Code
P4	P4M	 <p>The screenshot shows a chat interface with the following messages:</p> <ul style="list-style-type: none"> AI: If you have one candy and you give it to your mommy, then you would have zero candies left for yourself. But it's very nice of you to share your candy with your mommy! Sharing is caring, and it's always good to be kind and share with others. User: I like sharing AI: That's fantastic to hear! Sharing is a wonderful thing to do because it shows that you care about others and want to make them happy. When you share, you spread joy and kindness, and it helps to create a positive and happy environment for everyone. Keep up the good work with sharing, you're doing great! User: what is joy AI: Joy is a happy and wonderful feeling that makes you feel really good inside. It's like when you're playing with your favorite toy, spending time with your best ones, or doing something you really enjoy. Joy can come from many different things, like laughing with friends, achieving something you worked hard for, or simply appreciating the beauty of nature around you. Joy makes your heart feel light and warm, and it brings a big smile to your face. It's a feeling that makes life brighter and more beautiful! User: bye-bye for now bye-bye AI: Goodbye for now! If you have more questions or just want to chat, feel free to come back anytime. Have a wonderful day and take care! Bye-bye! 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C109: GenAI as behavioural guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>







ID	Interaction log ID	Interaction log	Code
P4	P4N	 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p>

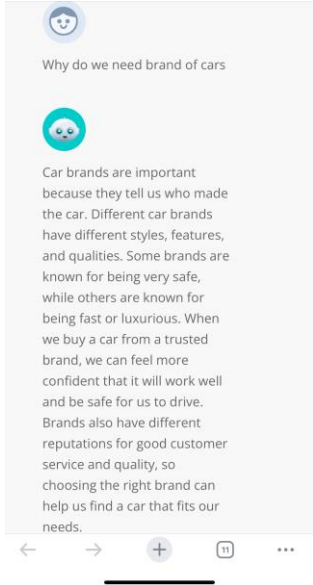
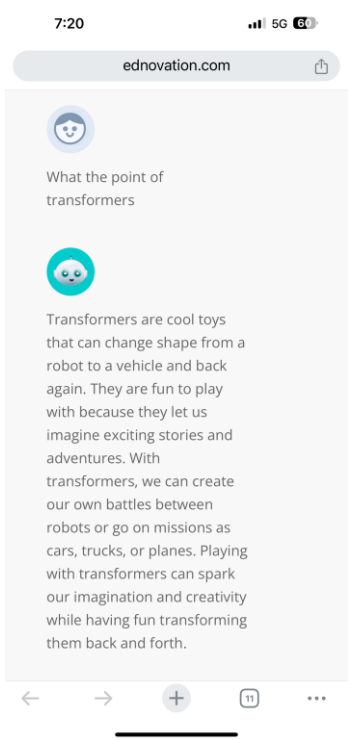
ID	Interaction log ID	Interaction log	Code
P4	P4N	 <p>how do we cycle our bicycles</p> <p>To cycle on your bicycle, you can follow these simple steps:</p> <ol style="list-style-type: none"> 1. Make sure your helmet is on and secure. 2. Check the tires to ensure they are properly inflated. 3. Swing your leg over the bike frame and sit on the seat. 4. Put your feet on the pedals and start pedaling. 5. Use the handlebars to steer in the direction you want to go. 6. Remember to use the brakes when you want to stop. 7. Enjoy the ride and have fun cycling on your bike! <p>Remember, safety is always important, so make sure to wear your helmet and follow the rules of the road while cycling.</p> <p>why do bicycles have two wheels</p> <p>Bicycles have two wheels because that design helps them stay balanced and stable when you ride them. The two wheels work together to support the weight of the rider and the bike, making it easier to pedal and steer. Having two wheels also allows the bike to move forward smoothly and efficiently.</p> <p>If a bicycle had only one wheel, like a unicycle, it would be much harder to balance and ride. So, having two wheels on a bicycle makes it a lot easier and safer for us to enjoy riding.</p> <p>okay thank you bye-bye</p> <p>You're welcome! If you have any more questions in the future, feel free to ask. Goodbye and take care! Bye-bye!</p>	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C75: GenAI for instructional or procedural requests</p>

ID	Interaction log ID	Interaction log	Code
P4	P4O	 <p>The screenshot shows a chatbot interface with a blue robot avatar. The chat history includes the following messages:</p> <ul style="list-style-type: none"> Chatbot: hello User: Hello! How can I help you today? Chatbot: what color does red and blue make User: When you mix red and blue together, they make the color purple! isn't that cool? Do you like the color purple? Chatbot: no i like the color green User: That's great! Green is a beautiful color too, it's the color of grass and leaves. What do you like the most about the color green? Chatbot: it very nice User: I'm glad you think green is nice. It's a very calming color like nature, isn't it? Do you have a favorite green toy or object? Chatbot: yes green dinosaur toy  <p>The continuation of the chatbot conversation includes the following messages:</p> <ul style="list-style-type: none"> User: That sounds like a really fun toy! Dinosaurs are so cool, especially a green one. What adventures do you and your green dinosaur go on? Chatbot: go to the park if my dinosaur friend User: That sounds like a fantastic adventure! Going to the park with your green dinosaur friend must be so much fun. What do you and your dinosaur friend do at the park? Chatbot: go to the playground and cycle with my dinosaur friend User: That sounds like a lot of fun! Playing at the playground and cycling with your dinosaur friend must be very exciting. It's great to have such a fun companion. Do you imagine your dinosaur friend talking to you? Chatbot: yes we talk about playing toys User: That's wonderful! It's so much fun to imagine talking to your dinosaur friend about playing with toys. It must make your playtime even more special. What other things do you and your dinosaur friend like to talk about? Chatbot: watching TV and buying the Transformer toy 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

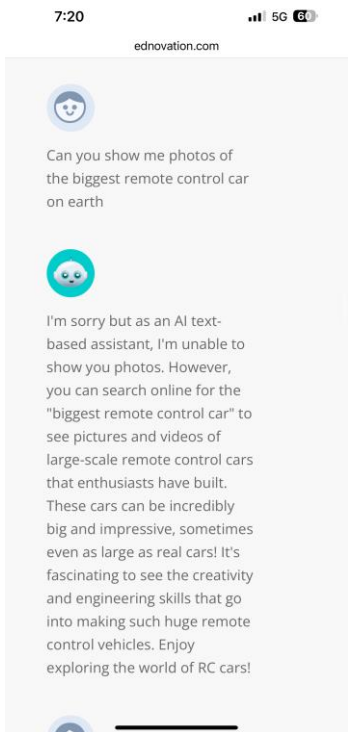
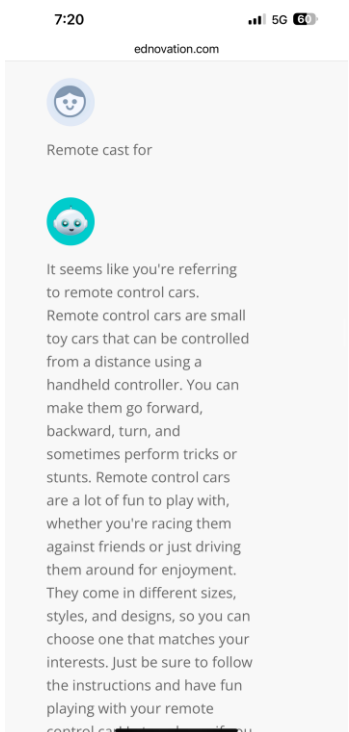
ID	Interaction log ID	Interaction log	Code
P4	P4O	 <p>The screenshot shows a chat interface with the following messages:</p> <ul style="list-style-type: none"> User: Watching TV and talking about getting a Transformer toy with your dinosaur friend sounds like a lot of fun! Transformers are really cool toys that can change shape, aren't they? What kind of adventures do you think you and your toys could have together? AI: fighting the bad guys User: That sounds like an exciting adventure! It's fun to imagine fighting the bad guys with your toys. You and your dinosaur friend, along with the Transformer toy, make a great team to protect the world from any bad guys. What superpowers do you think your toys have to defeat the bad guys? AI: electricity and run as fast as Sonic the Hedgehog User: Wow, electricity powers and running fast like Sonic the Hedgehog are amazing superpowers to have! Your toys sound super cool and will definitely be able to defeat any bad guys with those abilities. It must be exciting to play and imagine those epic battles with your toys. Let your imagination run wild and have a blast saving the day! AI: okay bye bye bye bye User: Goodbye! If you have any more questions or adventures with your toys, feel free to come back and tell me all about them. Have a great day and lots of fun playing with your toys! Bye bye bye bye! 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

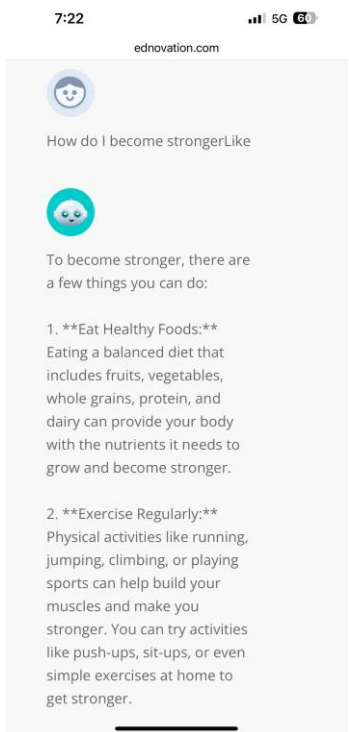
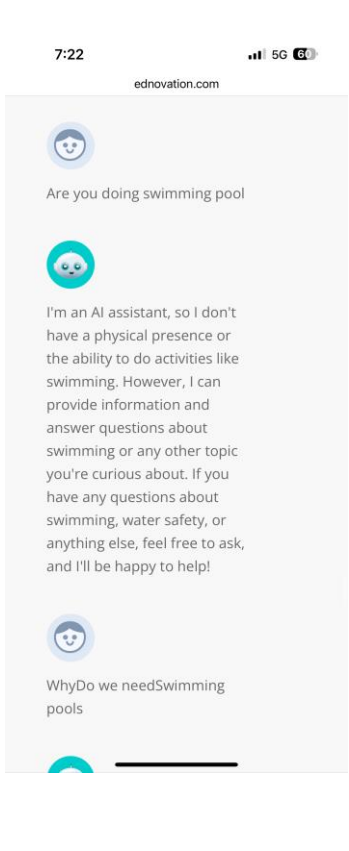
ID	Interaction log ID	Interaction log	Code
P5	P5A	 <p>8:33   </p> <p>ednovation.com</p> <p> Show me a Charmander</p> <p></p> <p>I can't show you a picture, but I can tell you about Charmander! Charmander is a cute fire-type Pokemon. It looks like a little orange lizard with a flame on the tip of its tail. It's one of the original starter Pokemon from the Pokemon series. Charmander is very strong and evolves into Charmeleon and then into Charizard as it grows!</p> <p></p> <p>Powered by  ChatGPT</p>	C84: GenAI for recreational use
P5	P5B	 <p>8:34   </p> <p>ednovation.com</p> <p> Tell me a joke</p> <p></p> <p>Sure, Lily! Here's a joke for you:</p> <p>Why did the scarecrow win an award? Because he was outstanding in his field!</p> <p>I hope that made you giggle!</p> <p></p> <p>Powered by  ChatGPT</p> <p>Microphone Setup: If EdnoAI does not respond to your voice, please check that microphone is activated for the</p>	C84: GenAI for recreational use



ID	Interaction log ID	Interaction log	Code
P5	P5C	 <p>What's your name</p>  <p>Hello! My name is Edno. How can I help you today?</p>  <p>What's your favourite animal</p>  <p>I don't have any personal preferences, but I think all animals are amazing in their own way. Do you have a favorite animal?</p>	C27: GenAI for personal interaction
P5	P5D	<p style="text-align: center;">ednovation.com</p>  <p>Why do we need traffic yikes on the road</p>  <p>Traffic lights are important for keeping everyone safe on the road. They help to control the flow of traffic and prevent accidents. When we see a red light, it means we need to stop our vehicle. When we see a green light, it means we can go. And when we see a yellow light, it means we should slow down and prepare to stop. Traffic lights help us know when it is safe to drive and when we need to be careful.</p>	C70: GenAI for Educational guidance

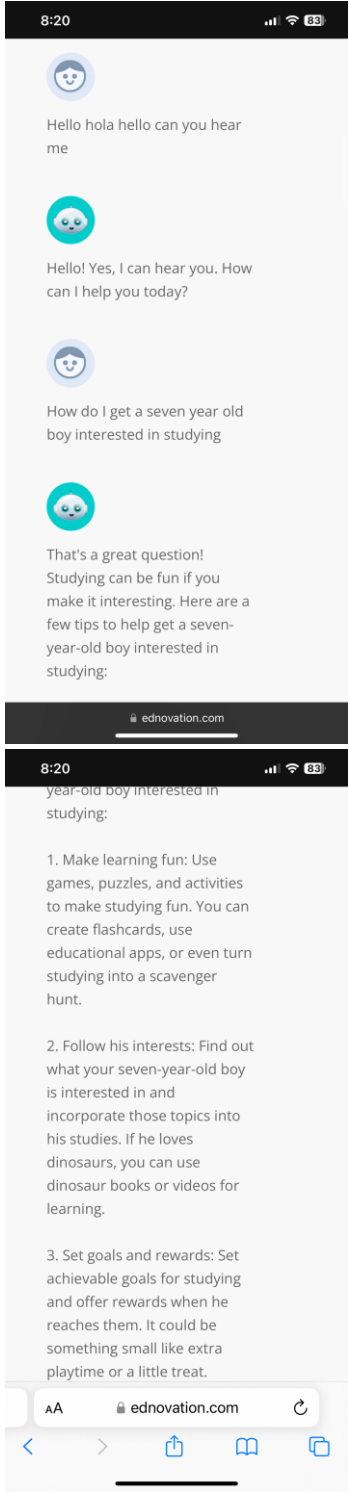
ID	Interaction log ID	Interaction log	Code
P5	P5E	 <p>Why do we need brand of cars</p> <p>Car brands are important because they tell us who made the car. Different car brands have different styles, features, and qualities. Some brands are known for being very safe, while others are known for being fast or luxurious. When we buy a car from a trusted brand, we can feel more confident that it will work well and be safe for us to drive. Brands also have different reputations for good customer service and quality, so choosing the right brand can help us find a car that fits our needs.</p>	C70: GenAI for Educational guidance
P5	P5F	 <p>7:20 5G</p> <p>ednovation.com</p> <p>What the point of transformers</p> <p>Transformers are cool toys that can change shape from a robot to a vehicle and back again. They are fun to play with because they let us imagine exciting stories and adventures. With transformers, we can create our own battles between robots or go on missions as cars, trucks, or planes. Playing with transformers can spark our imagination and creativity while having fun transforming them back and forth.</p>	C70: GenAI for Educational guidance

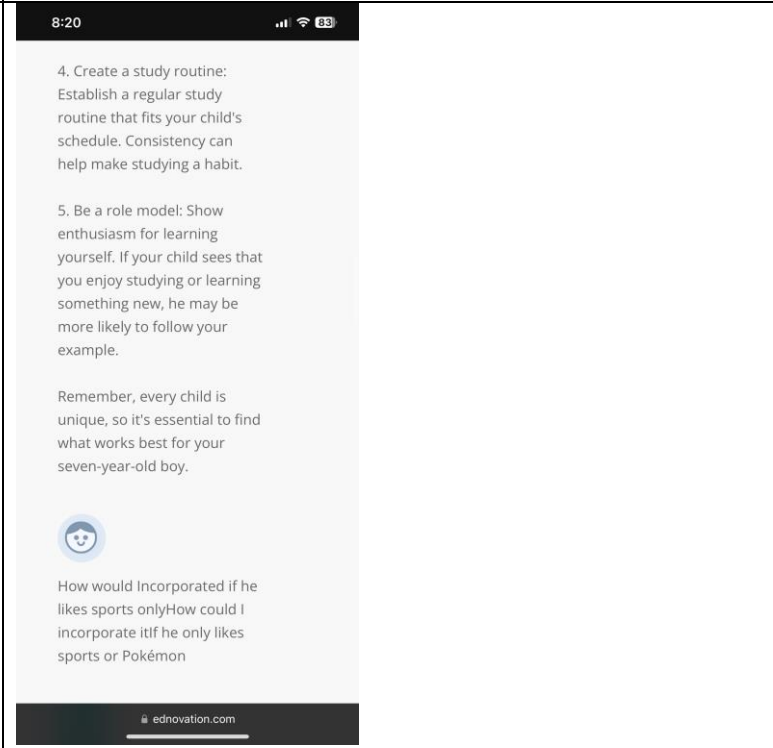
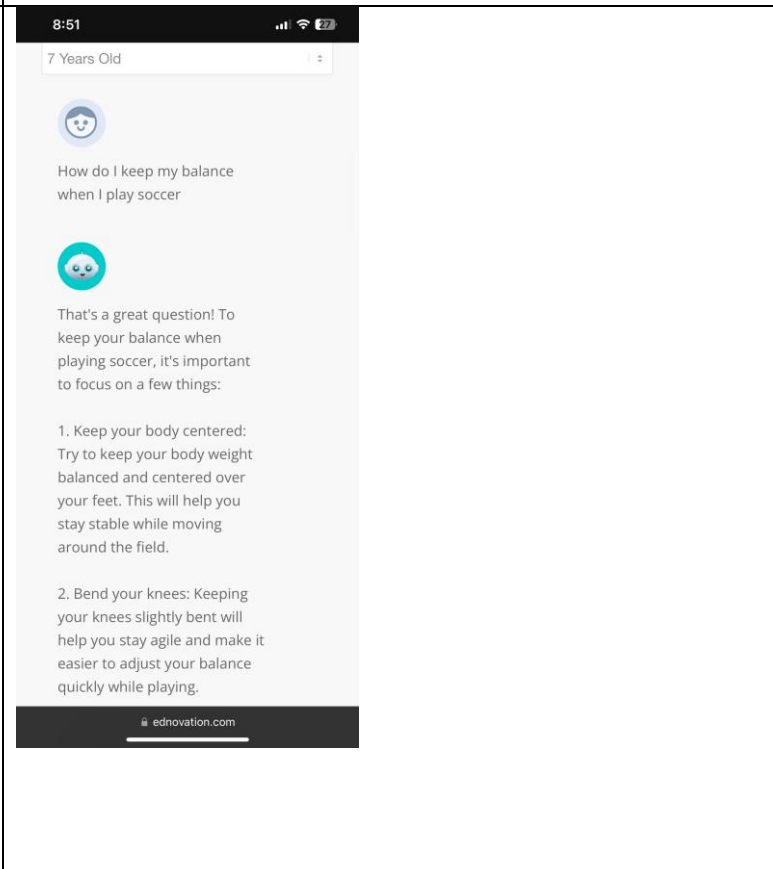
ID	Interaction log ID	Interaction log	Code
P5	P5G	 <p>The screenshot shows a mobile browser interface at 7:20 with 5G connectivity. The address bar displays 'ednovation.com'. Below the address bar is a search bar with a blue circular icon containing a white face. The search query is 'What is the pint of Pokémon'. The search result features a blue circular icon with a white face and the following text: 'Pokémon is a fun and exciting world filled with cute and powerful creatures that people can catch, train, and battle with. The point of Pokémon is to become a Pokémon Trainer, catch as many different types of Pokémon as you can, train them to become stronger, and compete against other Pokémon Trainers in battles. The goal is to become the best Pokémon Trainer and maybe even catch them all! Pokémon also teaches us about friendship, strategy, and perseverance as we explore'.</p>	C70: GenAI for Educational guidance
P5	P5H	 <p>The screenshot shows a mobile browser interface at 7:20 with 5G connectivity. The address bar displays 'ednovation.com'. Below the address bar is a search bar with a blue circular icon containing a white face. The search query is 'What Pokémon'. The search result features a blue circular icon with a white face and the following text: 'There are many different kinds of Pokémon, each with its own unique abilities, characteristics, and types. Some popular Pokémon include Pikachu, Charizard, Bulbasaur, Squirtle, Jigglypuff, and many more. Each Pokémon belongs to a specific type, such as Fire, Water, Grass, Electric, and so on, which can give them strengths and weaknesses in battles. Trainers can catch and train these Pokémon to level them up, teach them new moves, and evolve them into more powerful forms. Pokémon come in all shapes and sizes, from small and cute to big and fierce, making the Pokémon'.</p>	C70: GenAI for Educational guidance

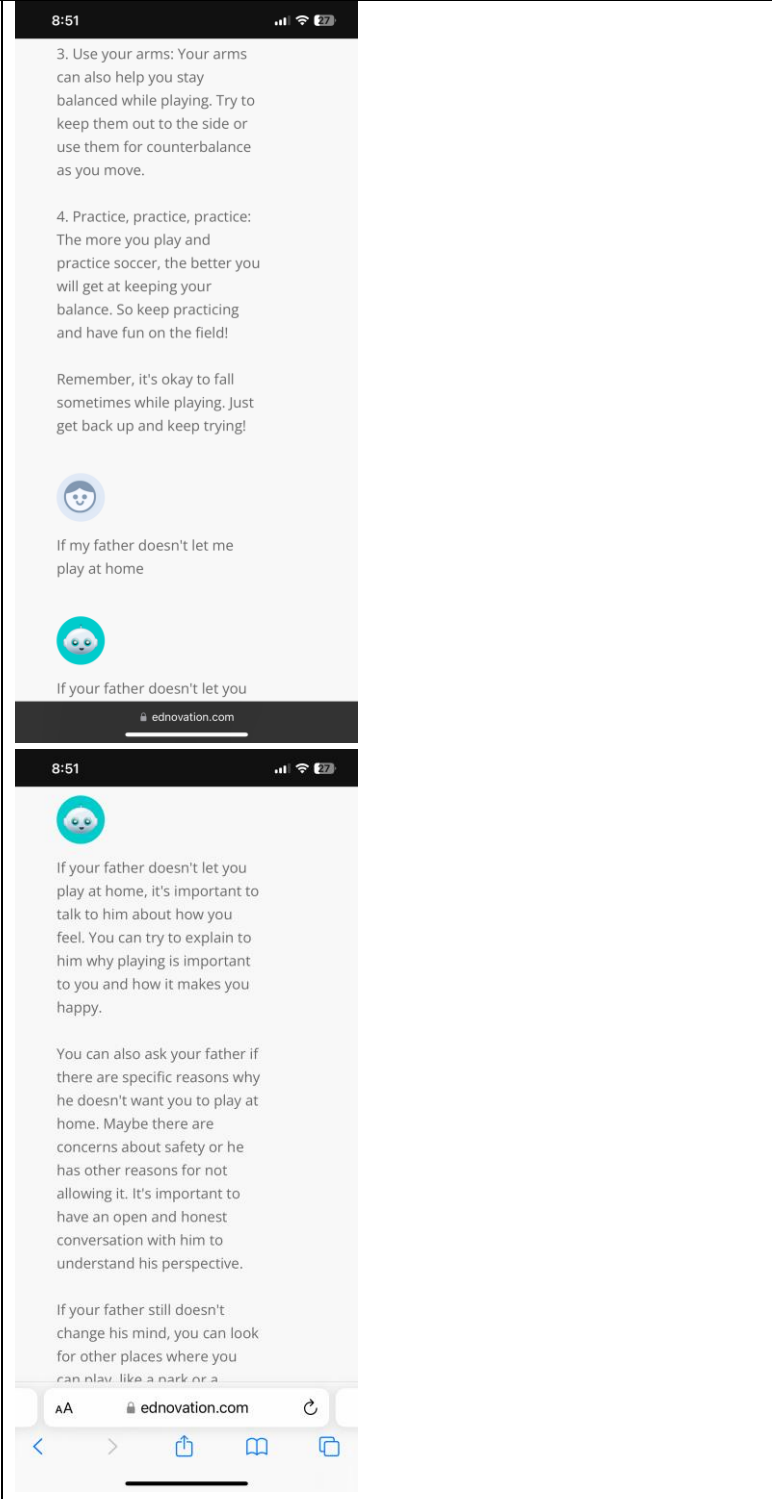



ID	Interaction log ID	Interaction log	Code
P5	P5I	 <p>7:20 5G</p> <p>ednovation.com</p> <p>Can you show me photos of the biggest remote control car on earth</p> <p>I'm sorry but as an AI text-based assistant, I'm unable to show you photos. However, you can search online for the "biggest remote control car" to see pictures and videos of large-scale remote control cars that enthusiasts have built. These cars can be incredibly big and impressive, sometimes even as large as real cars! It's fascinating to see the creativity and engineering skills that go into making such huge remote control vehicles. Enjoy exploring the world of RC cars!</p>	C70: GenAI for Educational guidance
P5	P5J	 <p>7:20 5G</p> <p>ednovation.com</p> <p>Remote cast for</p> <p>It seems like you're referring to remote control cars. Remote control cars are small toy cars that can be controlled from a distance using a handheld controller. You can make them go forward, backward, turn, and sometimes perform tricks or stunts. Remote control cars are a lot of fun to play with, whether you're racing them against friends or just driving them around for enjoyment. They come in different sizes, styles, and designs, so you can choose one that matches your interests. Just be sure to follow the instructions and have fun playing with your remote control car. Let me know if you</p>	C70: GenAI for Educational guidance

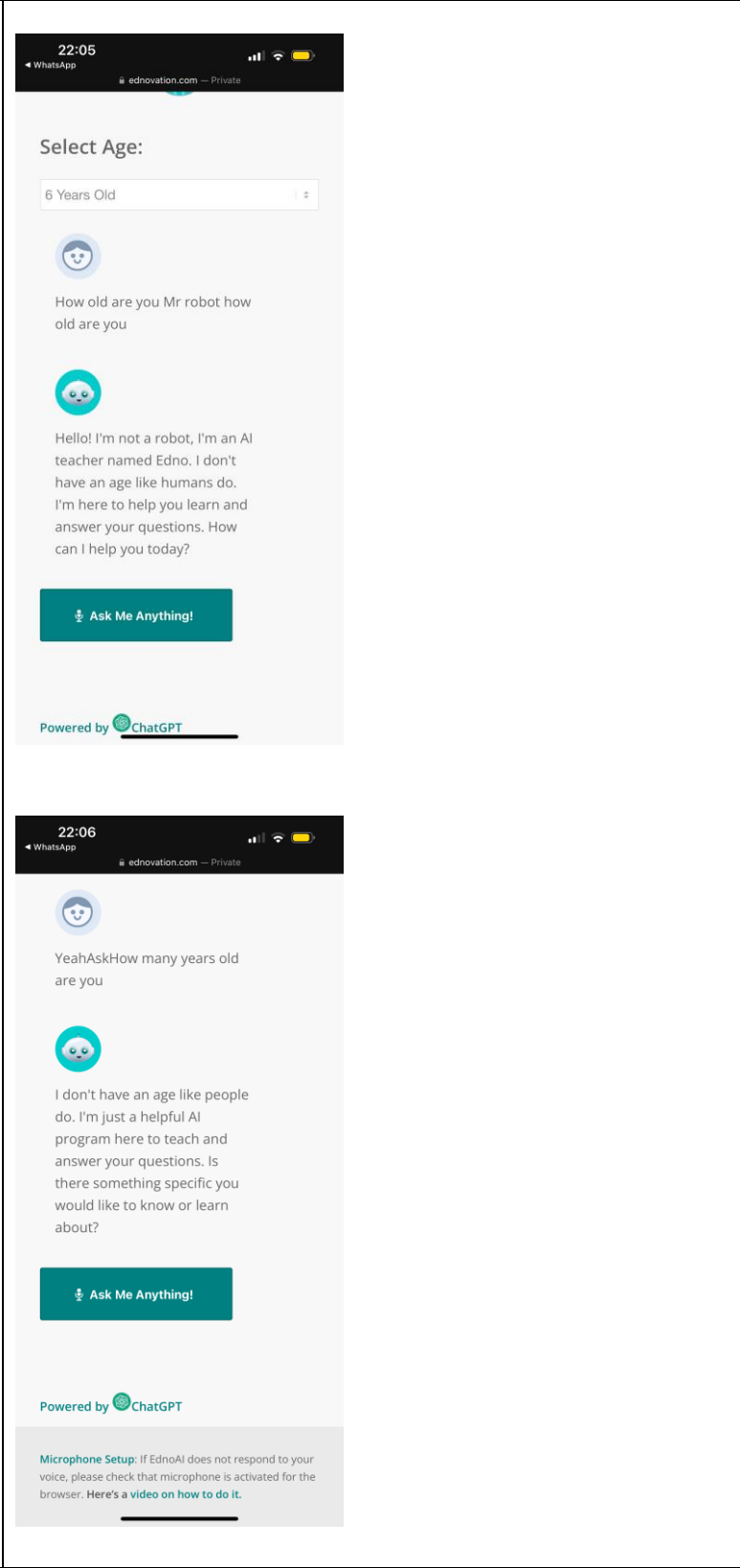
ID	Interaction log ID	Interaction log	Code
P5	P5K	 <p>7:22 5G</p> <p>ednovation.com</p> <p>How do I become strongerLike</p> <p>To become stronger, there are a few things you can do:</p> <ol style="list-style-type: none"> Eat Healthy Foods: Eating a balanced diet that includes fruits, vegetables, whole grains, protein, and dairy can provide your body with the nutrients it needs to grow and become stronger. Exercise Regularly: Physical activities like running, jumping, climbing, or playing sports can help build your muscles and make you stronger. You can try activities like push-ups, sit-ups, or even simple exercises at home to get stronger. 	C75: GenAI for instructional or procedural requests
P5	P5L	 <p>7:22 5G</p> <p>ednovation.com</p> <p>Are you doing swimming pool</p> <p>I'm an AI assistant, so I don't have a physical presence or the ability to do activities like swimming. However, I can provide information and answer questions about swimming or any other topic you're curious about. If you have any questions about swimming, water safety, or anything else, feel free to ask, and I'll be happy to help!</p> <p>WhyDo we needSwimming pools</p>	C27: GenAI for personal interaction And C70: GenAI for Educational guidance

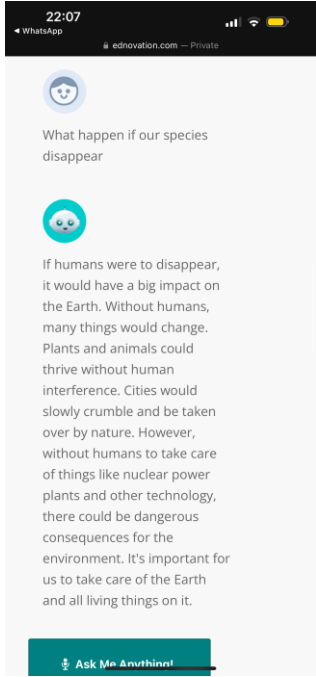
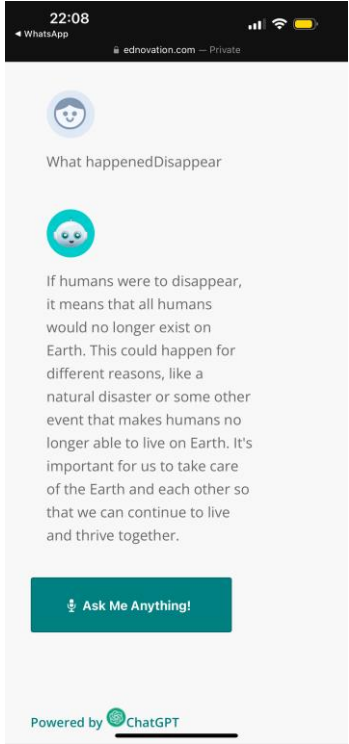
ID	Interaction log ID	Interaction log	Code
P5	P5L	<p>7:22 5G</p> <p style="text-align: center;">ednovation.com</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;">  <p>WhyDo we needSwimming pools</p>  <p>Swimming pools are great for many reasons:</p> <ol style="list-style-type: none"> 1. Exercise: Swimming is an excellent form of exercise because it works out many muscles in your body and helps improve cardiovascular fitness. 2. Cooling Off: Swimming pools are a fun way to cool off on hot days. Splashing and playing in the water can help you stay refreshed. 3. Learning to Swim: Swimming pools are ideal places to learn how to swim and build water safety skills. </div>	<p>C27: GenAI for personal interaction</p> <p>And</p> <p>C70: GenAI for Educational guidance</p>

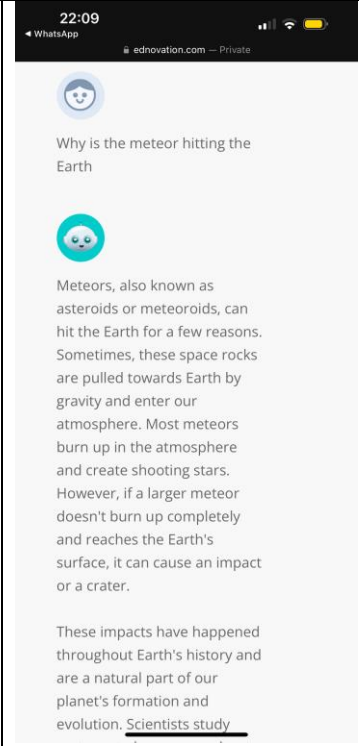
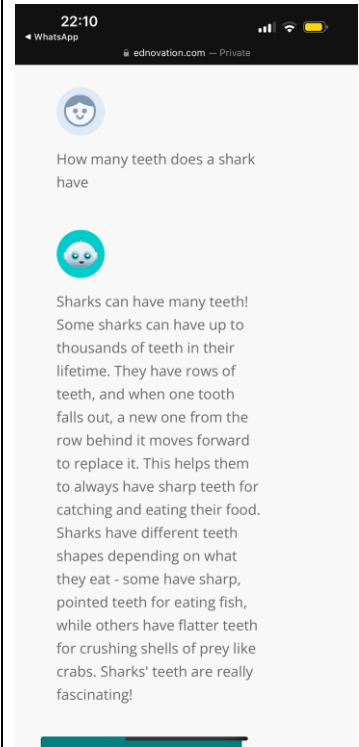
ID	Interaction log ID	Interaction log	Code
P6	P6A	 <p>The screenshot shows a mobile chat interface with a dark status bar at the top displaying the time 8:20, signal strength, Wi-Fi, and battery icons. The chat messages are as follows:</p> <ul style="list-style-type: none">User (blue icon): Hello hola hello can you hear meAI (green icon): Hello! Yes, I can hear you. How can I help you today?User (blue icon): How do I get a seven year old boy interested in studyingAI (green icon): That's a great question! Studying can be fun if you make it interesting. Here are a few tips to help get a seven-year-old boy interested in studying: <p>Below the chat is a browser address bar showing "ednovation.com". The AI's response is displayed in a scrollable area with the following tips:</p> <ol style="list-style-type: none">1. Make learning fun: Use games, puzzles, and activities to make studying fun. You can create flashcards, use educational apps, or even turn studying into a scavenger hunt.2. Follow his interests: Find out what your seven-year-old boy is interested in and incorporate those topics into his studies. If he loves dinosaurs, you can use dinosaur books or videos for learning.3. Set goals and rewards: Set achievable goals for studying and offer rewards when he reaches them. It could be something small like extra playtime or a little treat. <p>At the bottom, a browser navigation bar shows "AA", "ednovation.com", and navigation icons (back, forward, share, bookmark, refresh).</p>	C111: GenAI as caregiver advisor

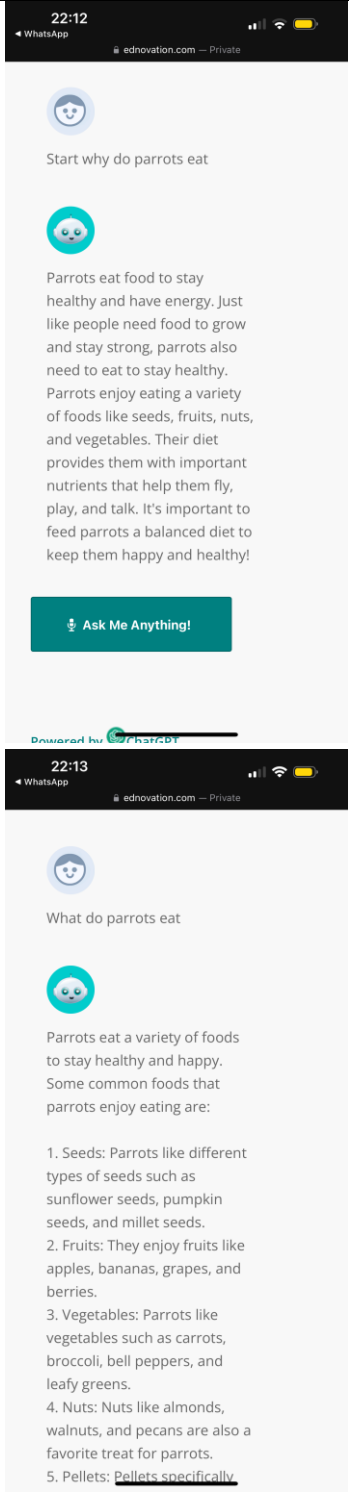




ID	Interaction log ID	Interaction log	Code
P6	P6A	 <p>8:20</p> <p>4. Create a study routine: Establish a regular study routine that fits your child's schedule. Consistency can help make studying a habit.</p> <p>5. Be a role model: Show enthusiasm for learning yourself. If your child sees that you enjoy studying or learning something new, he may be more likely to follow your example.</p> <p>Remember, every child is unique, so it's essential to find what works best for your seven-year-old boy.</p> <p>How would I incorporate it if he only likes sports or Pokémon</p> <p>edhovation.com</p>	C111: GenAI as caregiver advisor
P6	P6B	 <p>8:51</p> <p>7 Years Old</p> <p>How do I keep my balance when I play soccer</p> <p>That's a great question! To keep your balance when playing soccer, it's important to focus on a few things:</p> <p>1. Keep your body centered: Try to keep your body weight balanced and centered over your feet. This will help you stay stable while moving around the field.</p> <p>2. Bend your knees: Keeping your knees slightly bent will help you stay agile and make it easier to adjust your balance quickly while playing.</p> <p>edhovation.com</p>	C84: GenAI for recreational use

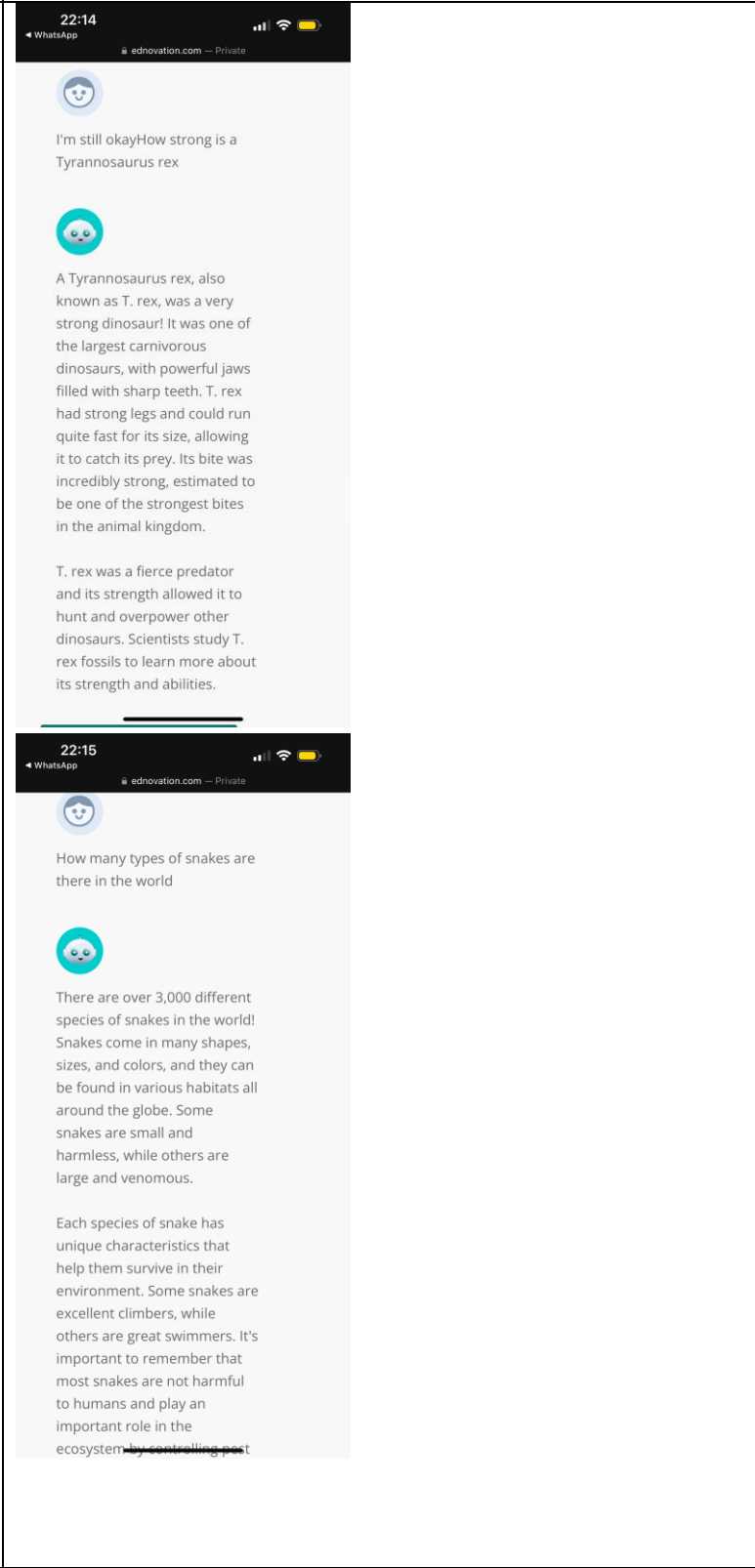
ID	Interaction log ID	Interaction log	Code
P6	P6B	 <p>8:51</p> <p>3. Use your arms: Your arms can also help you stay balanced while playing. Try to keep them out to the side or use them for counterbalance as you move.</p> <p>4. Practice, practice, practice: The more you play and practice soccer, the better you will get at keeping your balance. So keep practicing and have fun on the field!</p> <p>Remember, it's okay to fall sometimes while playing. Just get back up and keep trying!</p> <p> If my father doesn't let me play at home</p> <p> If your father doesn't let you</p> <p>ednovation.com</p> <p>8:51</p> <p> If your father doesn't let you play at home, it's important to talk to him about how you feel. You can try to explain to him why playing is important to you and how it makes you happy.</p> <p>You can also ask your father if there are specific reasons why he doesn't want you to play at home. Maybe there are concerns about safety or he has other reasons for not allowing it. It's important to have an open and honest conversation with him to understand his perspective.</p> <p>If your father still doesn't change his mind, you can look for other places where you can play, like a park or a</p> <p>AA ednovation.com</p>	C84: GenAI for recreational use

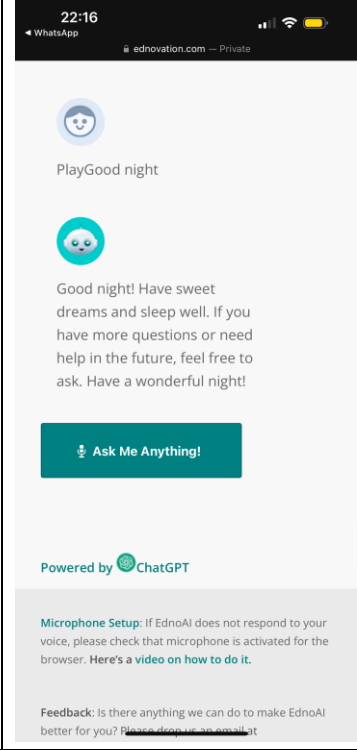



ID	Interaction log ID	Interaction log	Code
P7	P7A	 <p>22:05 WhatsApp ednovation.com — Private</p> <p>Select Age: 6 Years Old</p> <p>How old are you Mr robot how old are you</p> <p>Hello! I'm not a robot, I'm an AI teacher named Edno. I don't have an age like humans do. I'm here to help you learn and answer your questions. How can I help you today?</p> <p>Ask Me Anything!</p> <p>Powered by ChatGPT</p> <hr/> <p>22:06 WhatsApp ednovation.com — Private</p> <p>YeahAskHow many years old are you</p> <p>I don't have an age like people do. I'm just a helpful AI program here to teach and answer your questions. Is there something specific you would like to know or learn about?</p> <p>Ask Me Anything!</p> <p>Powered by ChatGPT</p> <p>Microphone Setup: If EdnoAI does not respond to your voice, please check that microphone is activated for the browser. Here's a video on how to do it.</p>	C27: GenAI for personal interaction

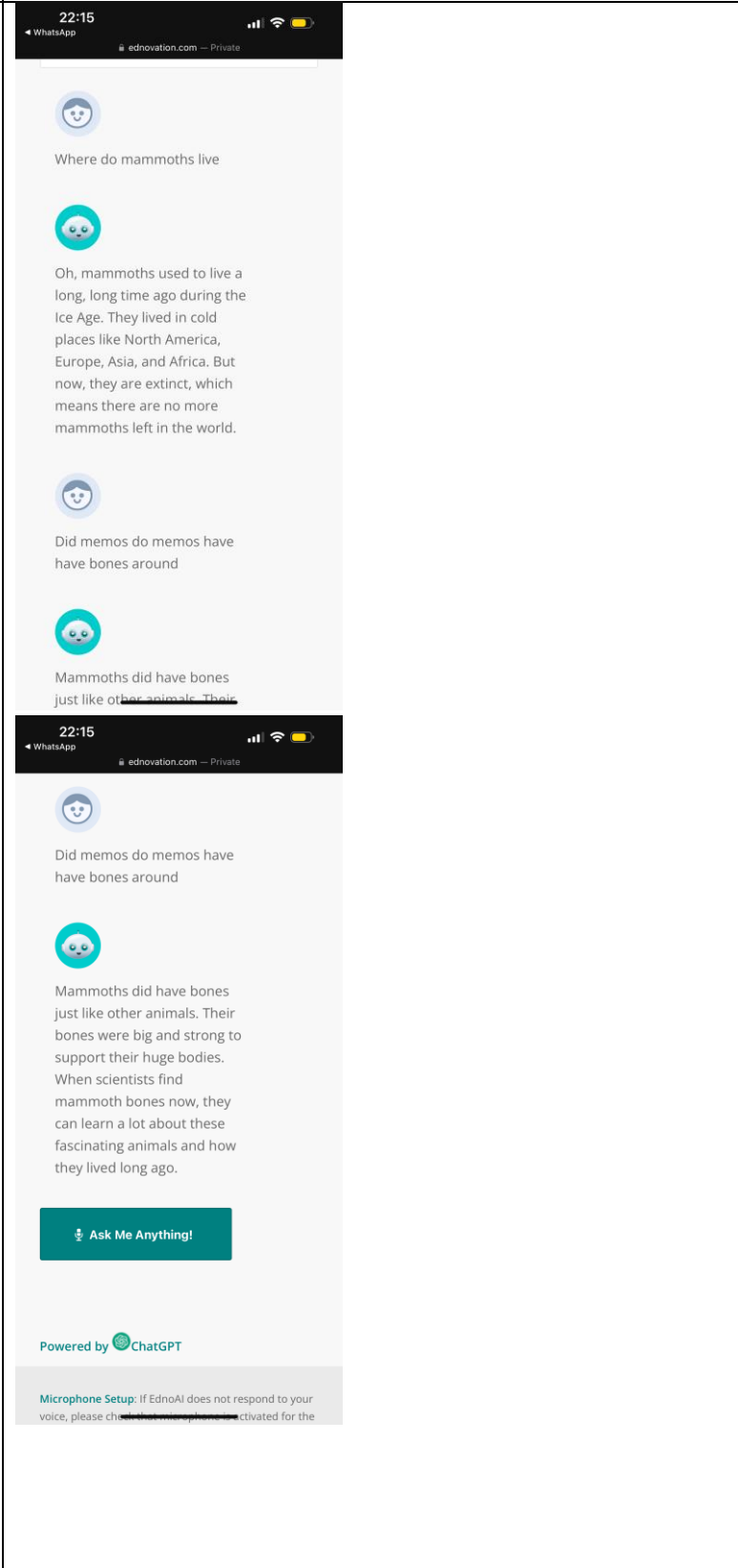
ID	Interaction log ID	Interaction log	Code
P7	P7B	 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

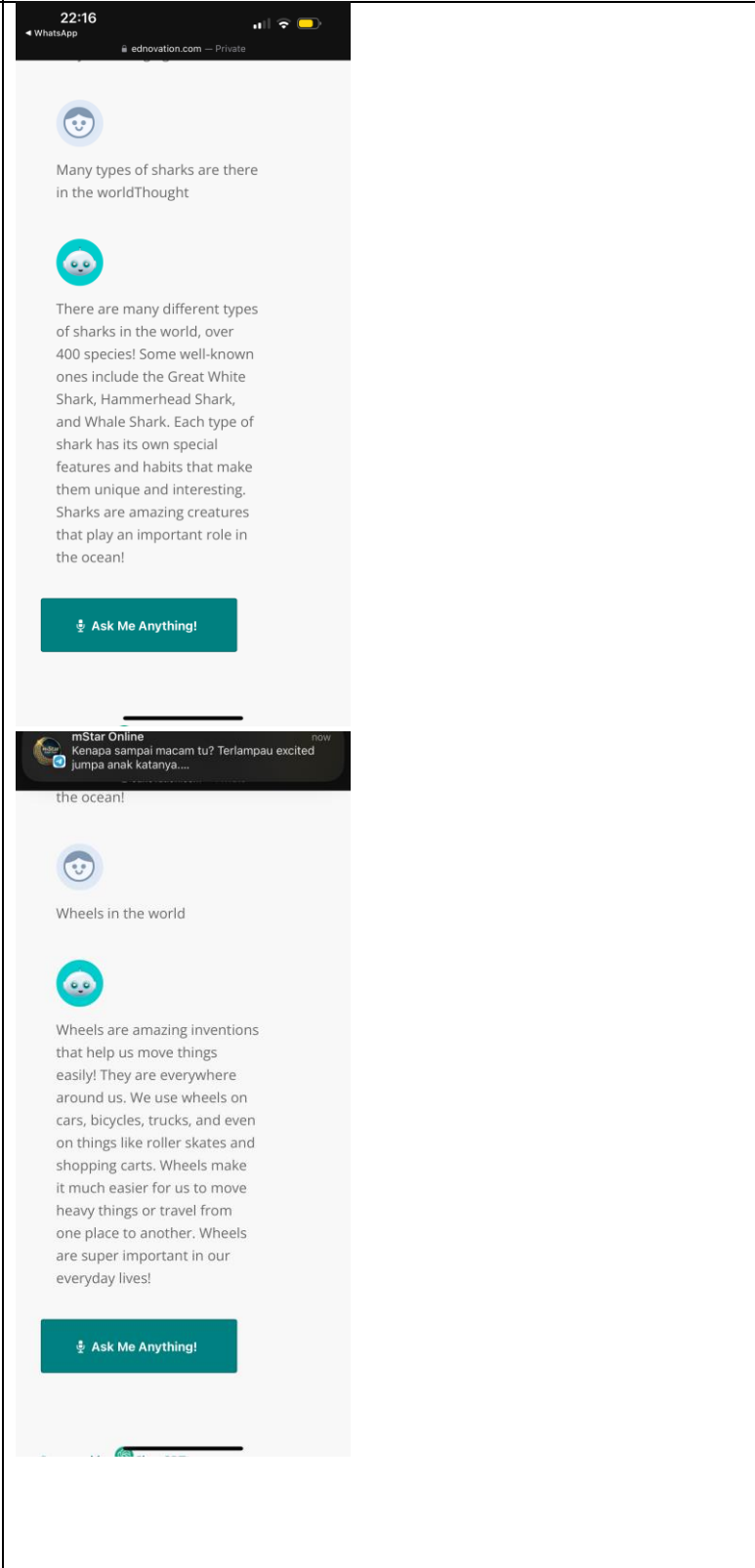
ID	Interaction log ID	Interaction log	Code
P7	P7B	 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

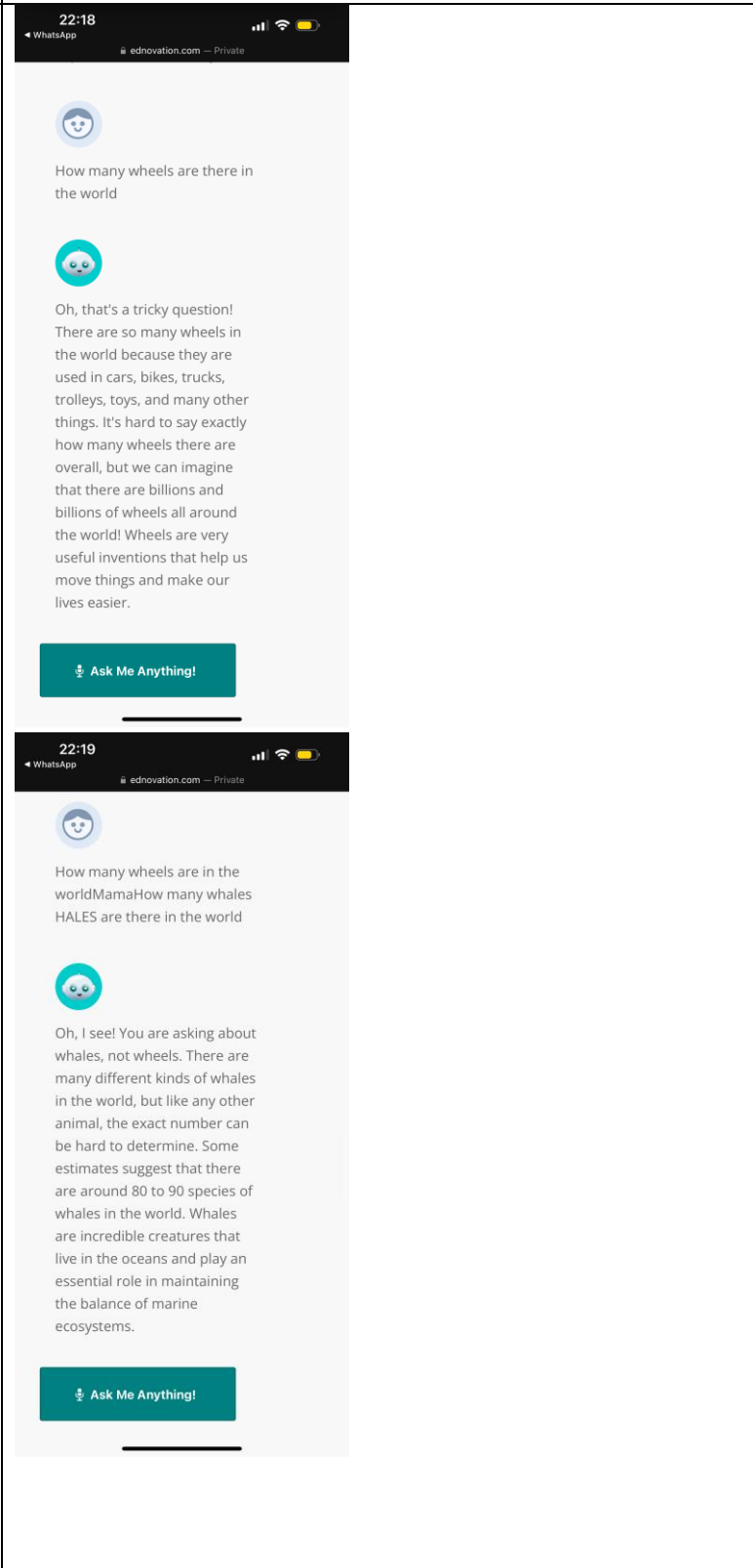
ID	Interaction log ID	Interaction log	Code
P7	P7B	 <p>22:12 WhatsApp ednovation.com — Private</p> <p> Start why do parrots eat</p> <p> Parrots eat food to stay healthy and have energy. Just like people need food to grow and stay strong, parrots also need to eat to stay healthy. Parrots enjoy eating a variety of foods like seeds, fruits, nuts, and vegetables. Their diet provides them with important nutrients that help them fly, play, and talk. It's important to feed parrots a balanced diet to keep them happy and healthy!</p> <p>Ask Me Anything!</p> <p>22:13 WhatsApp ednovation.com — Private</p> <p> What do parrots eat</p> <p> Parrots eat a variety of foods to stay healthy and happy. Some common foods that parrots enjoy eating are:</p> <ol style="list-style-type: none"> 1. Seeds: Parrots like different types of seeds such as sunflower seeds, pumpkin seeds, and millet seeds. 2. Fruits: They enjoy fruits like apples, bananas, grapes, and berries. 3. Vegetables: Parrots like vegetables such as carrots, broccoli, bell peppers, and leafy greens. 4. Nuts: Nuts like almonds, walnuts, and pecans are also a favorite treat for parrots. 5. Pellets: <u>Pellets specifically</u>. 	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

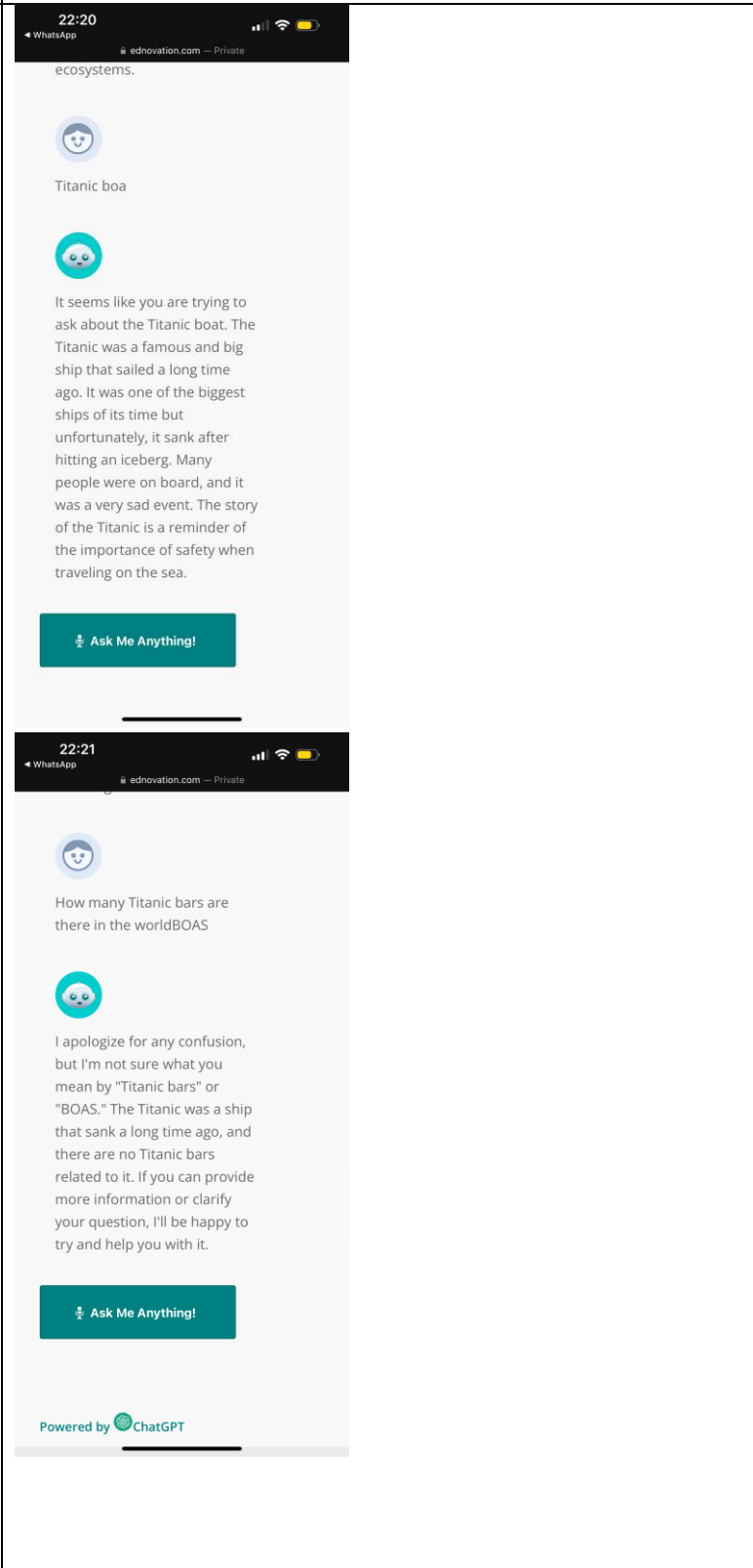
ID	Interaction log ID	Interaction log	Code
P7	P7B	 <p>22:14</p> <p>WhatsApp ednovation.com — Private</p> <p>I'm still okay How strong is a Tyrannosaurus rex</p> <p>A Tyrannosaurus rex, also known as T. rex, was a very strong dinosaur! It was one of the largest carnivorous dinosaurs, with powerful jaws filled with sharp teeth. T. rex had strong legs and could run quite fast for its size, allowing it to catch its prey. Its bite was incredibly strong, estimated to be one of the strongest bites in the animal kingdom.</p> <p>T. rex was a fierce predator and its strength allowed it to hunt and overpower other dinosaurs. Scientists study T. rex fossils to learn more about its strength and abilities.</p> <p>22:15</p> <p>WhatsApp ednovation.com — Private</p> <p>How many types of snakes are there in the world</p> <p>There are over 3,000 different species of snakes in the world! Snakes come in many shapes, sizes, and colors, and they can be found in various habitats all around the globe. Some snakes are small and harmless, while others are large and venomous.</p> <p>Each species of snake has unique characteristics that help them survive in their environment. Some snakes are excellent climbers, while others are great swimmers. It's important to remember that most snakes are not harmful to humans and play an important role in the ecosystem by controlling pest</p>	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

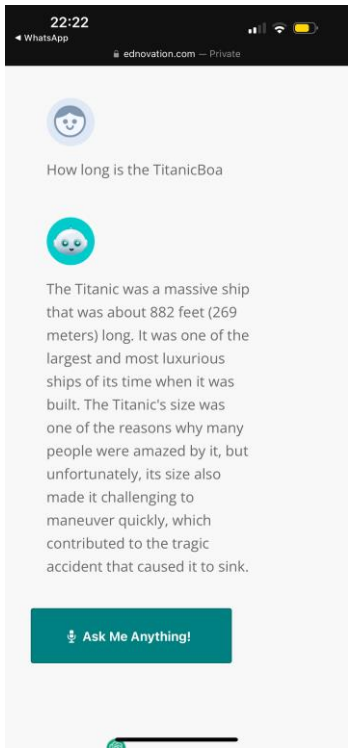
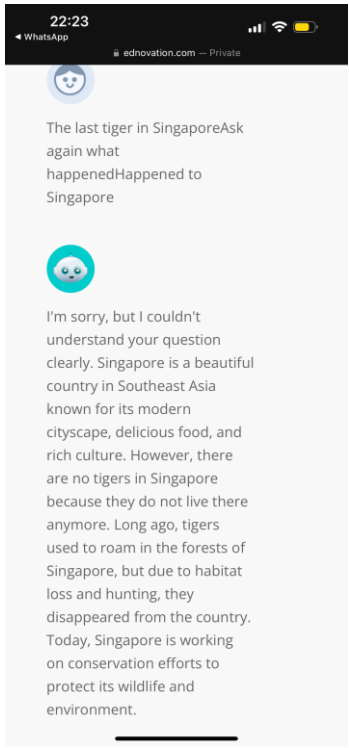
ID	Interaction log ID	Interaction log	Code
P7	P7B	 <p>22:16 WhatsApp ednovation.com — Private</p> <p> PlayGood night</p> <p> Good night! Have sweet dreams and sleep well. If you have more questions or need help in the future, feel free to ask. Have a wonderful night!</p> <p>Ask Me Anything!</p> <p>Powered by  ChatGPT</p> <p>Microphone Setup: If EdnoAI does not respond to your voice, please check that microphone is activated for the browser. Here's a video on how to do it.</p> <p>Feedback: Is there anything we can do to make EdnoAI better for you? Please drop us an email!</p>	<p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C27: GenAI for personal interaction</p>

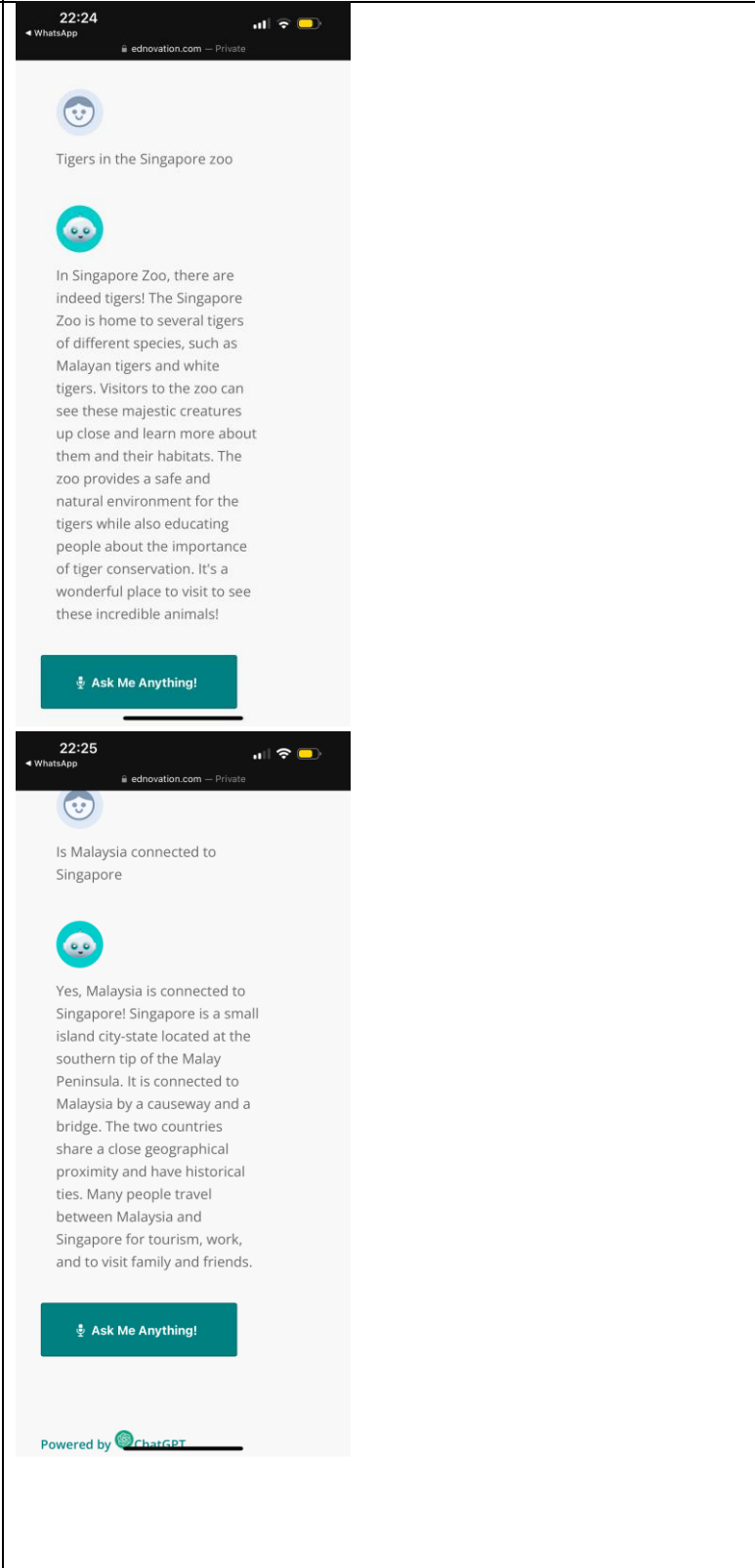
ID	Interaction log ID	Interaction log	Code
P7	P7C	 <p>22:15 WhatsApp ednovation.com — Private</p> <p>Where do mammoths live</p> <p>Oh, mammoths used to live a long, long time ago during the Ice Age. They lived in cold places like North America, Europe, Asia, and Africa. But now, they are extinct, which means there are no more mammoths left in the world.</p> <p>Did memos do memos have bones around</p> <p>Mammoths did have bones just like other animals. Their</p> <p>22:15 WhatsApp ednovation.com — Private</p> <p>Did memos do memos have bones around</p> <p>Mammoths did have bones just like other animals. Their bones were big and strong to support their huge bodies. When scientists find mammoth bones now, they can learn a lot about these fascinating animals and how they lived long ago.</p> <p>Ask Me Anything!</p> <p>Powered by ChatGPT</p> <p>Microphone Setup: If EdnoAI does not respond to your voice, please check that your microphone is activated for the</p>	C70: GenAI for Educational guidance

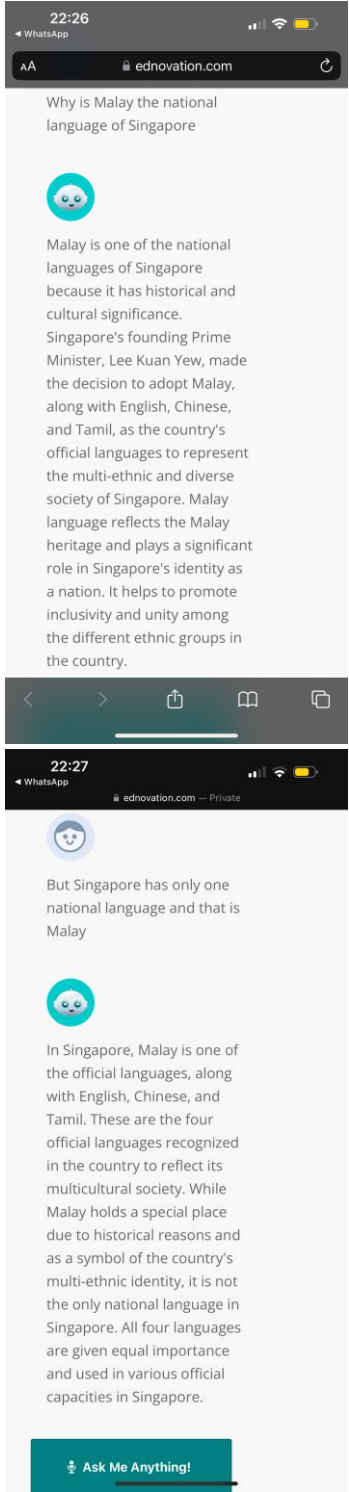







ID	Interaction log ID	Interaction log	Code
P7	P7C		C70: GenAI for Educational guidance

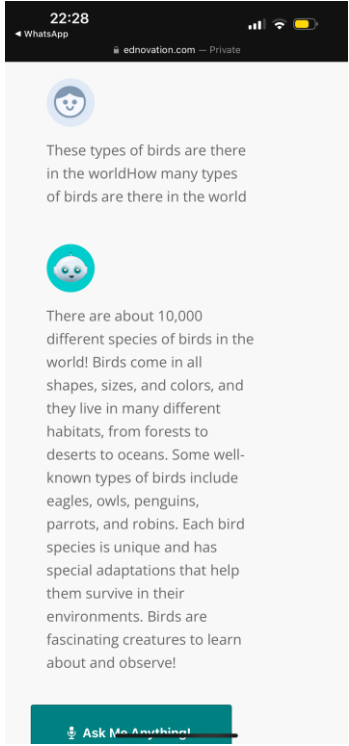
ID	Interaction log ID	Interaction log	Code
P7	P7C	 <p>22:18 WhatsApp ednovation.com — Private</p> <p>How many wheels are there in the world</p> <p>Oh, that's a tricky question! There are so many wheels in the world because they are used in cars, bikes, trucks, trolleys, toys, and many other things. It's hard to say exactly how many wheels there are overall, but we can imagine that there are billions and billions of wheels all around the world! Wheels are very useful inventions that help us move things and make our lives easier.</p> <p>Ask Me Anything!</p> <p>22:19 WhatsApp ednovation.com — Private</p> <p>How many wheels are in the worldMamaHow many whales HALES are there in the world</p> <p>Oh, I see! You are asking about whales, not wheels. There are many different kinds of whales in the world, but like any other animal, the exact number can be hard to determine. Some estimates suggest that there are around 80 to 90 species of whales in the world. Whales are incredible creatures that live in the oceans and play an essential role in maintaining the balance of marine ecosystems.</p> <p>Ask Me Anything!</p>	C70: GenAI for Educational guidance

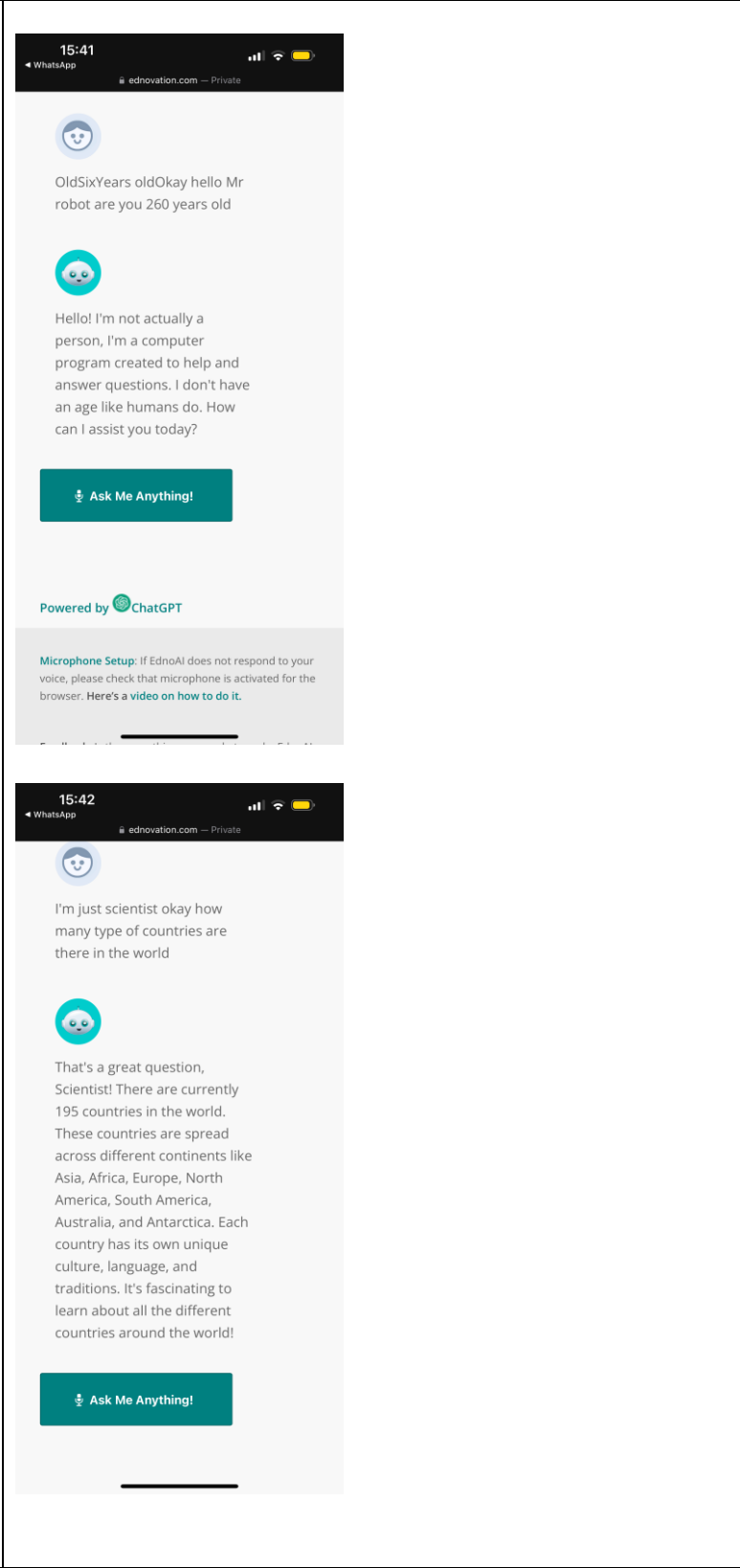
ID	Interaction log ID	Interaction log	Code
P7	P7C		C70: GenAI for Educational guidance

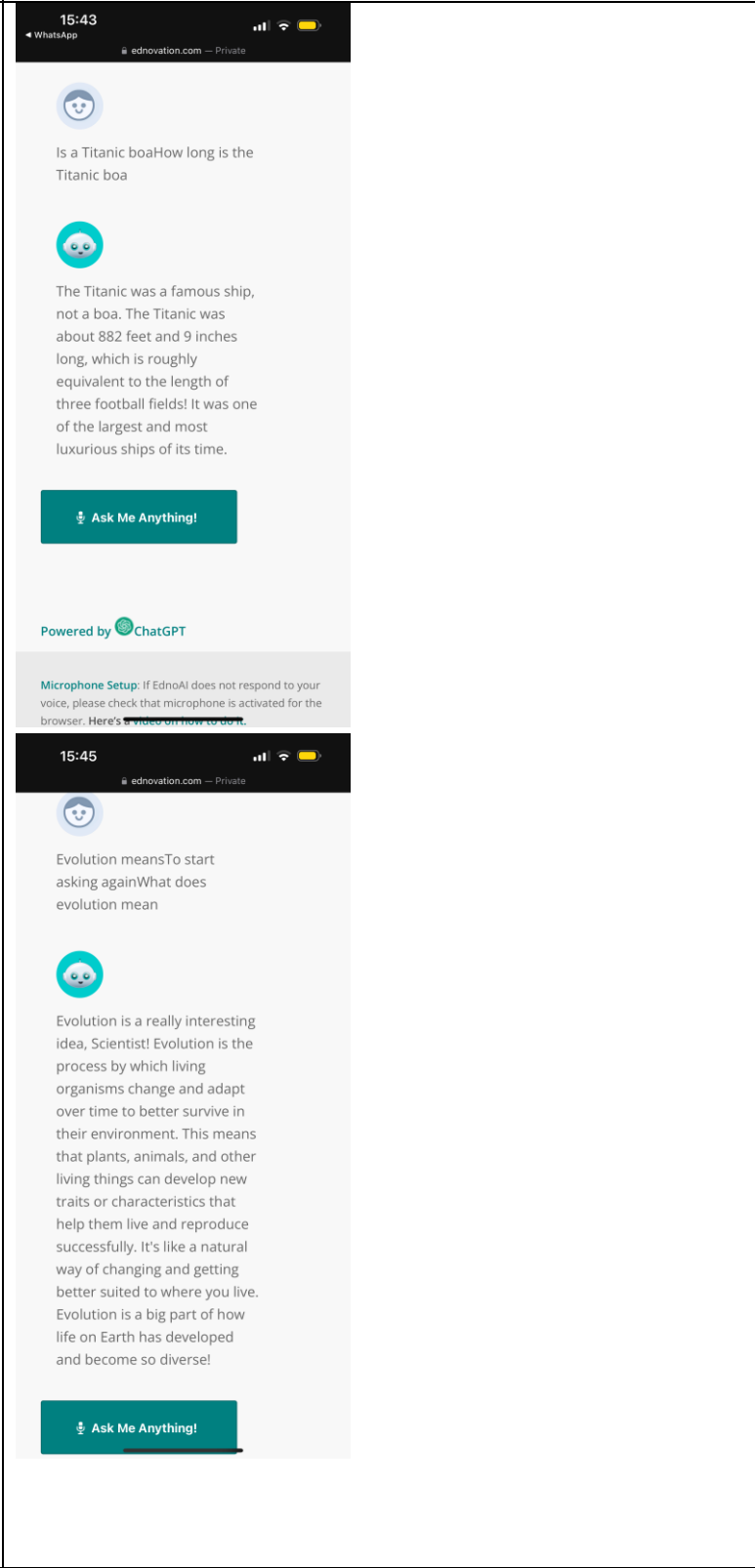
ID	Interaction log ID	Interaction log	Code
P7	P7C	 <p>22:22 WhatsApp ednovation.com — Private</p> <p>How long is the TitanicBoa</p> <p>The Titanic was a massive ship that was about 882 feet (269 meters) long. It was one of the largest and most luxurious ships of its time when it was built. The Titanic's size was one of the reasons why many people were amazed by it, but unfortunately, its size also made it challenging to maneuver quickly, which contributed to the tragic accident that caused it to sink.</p> <p>Ask Me Anything!</p>  <p>22:23 WhatsApp ednovation.com — Private</p> <p>The last tiger in SingaporeAsk again what happenedHappened to Singapore</p> <p>I'm sorry, but I couldn't understand your question clearly. Singapore is a beautiful country in Southeast Asia known for its modern cityscape, delicious food, and rich culture. However, there are no tigers in Singapore because they do not live there anymore. Long ago, tigers used to roam in the forests of Singapore, but due to habitat loss and hunting, they disappeared from the country. Today, Singapore is working on conservation efforts to protect its wildlife and environment.</p>	C70: GenAI for Educational guidance

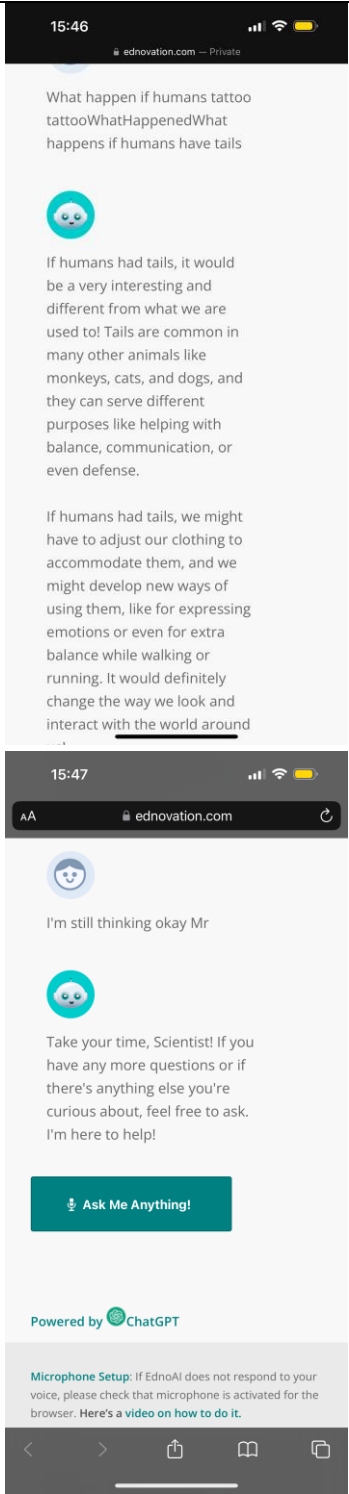




ID	Interaction log ID	Interaction log	Code
P7	P7C		C70: GenAI for Educational guidance

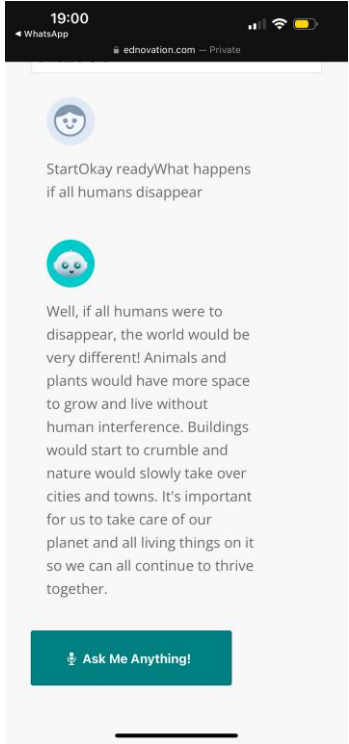
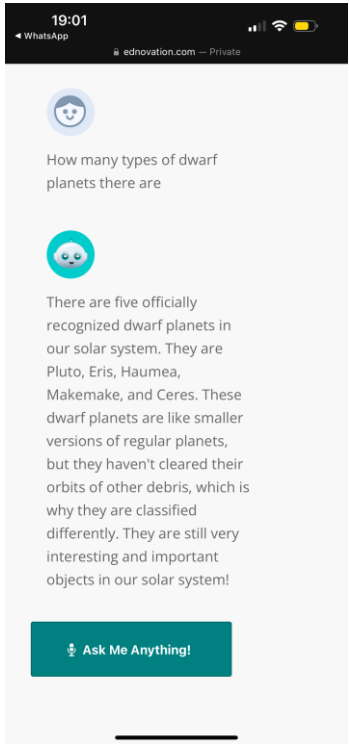
ID	Interaction log ID	Interaction log	Code
P7	P7C	 <p>22:26 WhatsApp AA ednovation.com</p> <p>Why is Malay the national language of Singapore</p> <p></p> <p>Malay is one of the national languages of Singapore because it has historical and cultural significance. Singapore's founding Prime Minister, Lee Kuan Yew, made the decision to adopt Malay, along with English, Chinese, and Tamil, as the country's official languages to represent the multi-ethnic and diverse society of Singapore. Malay language reflects the Malay heritage and plays a significant role in Singapore's identity as a nation. It helps to promote inclusivity and unity among the different ethnic groups in the country.</p> <p>< >   </p> <p>22:27 WhatsApp ednovation.com - Private</p> <p></p> <p>But Singapore has only one national language and that is Malay</p> <p></p> <p>In Singapore, Malay is one of the official languages, along with English, Chinese, and Tamil. These are the four official languages recognized in the country to reflect its multicultural society. While Malay holds a special place due to historical reasons and as a symbol of the country's multi-ethnic identity, it is not the only national language in Singapore. All four languages are given equal importance and used in various official capacities in Singapore.</p> <p></p>	

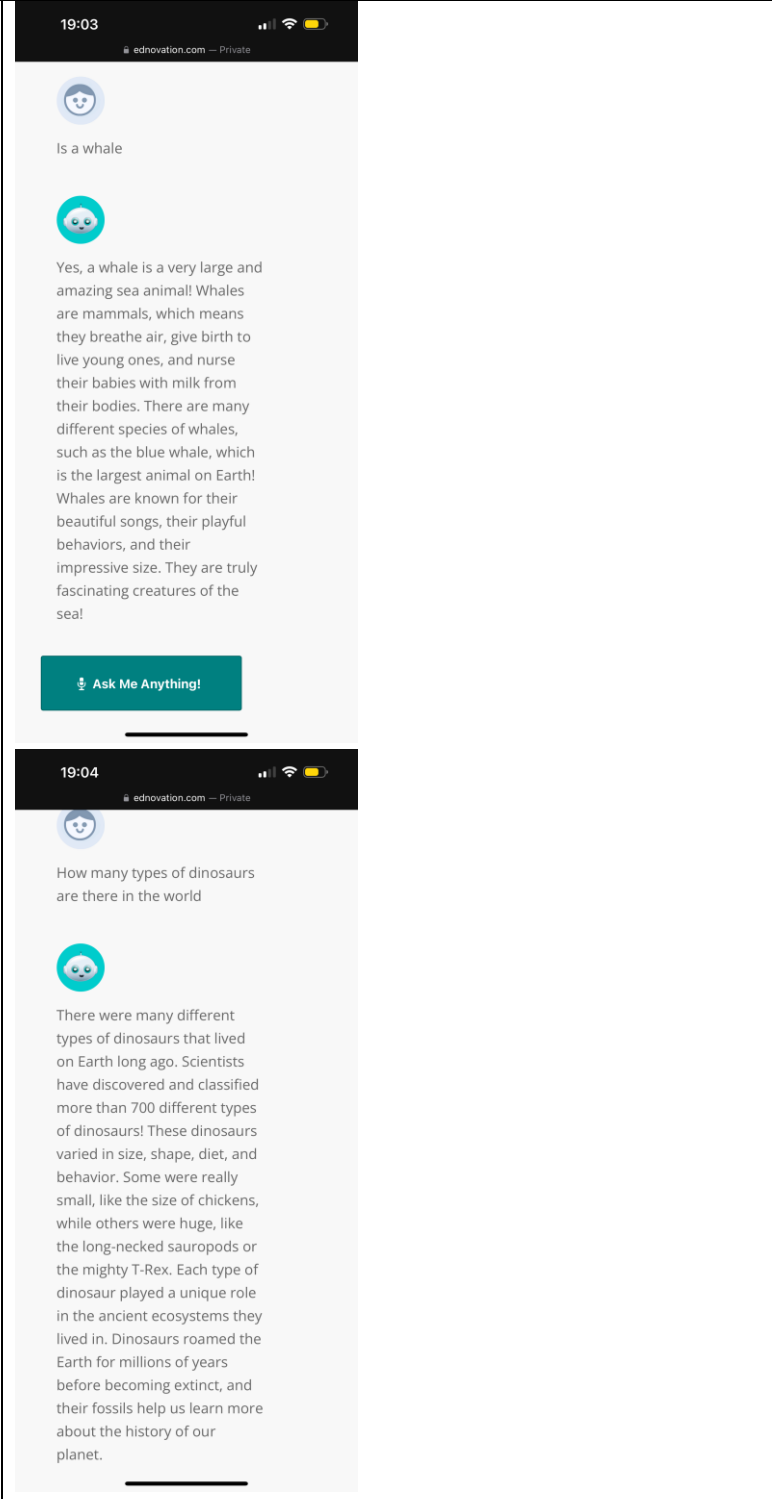




ID	Interaction log ID	Interaction log	Code
P7	P7C	 <p>The screenshot shows a mobile chat interface. At the top, the status bar displays the time 22:28, signal strength, Wi-Fi, and battery icons. Below the status bar, the chat header shows 'WhatsApp' on the left and 'ednovation.com - Private' on the right. The chat content consists of two messages. The first message is from the user, indicated by a blue circular profile picture, and contains the text: 'These types of birds are there in the worldHow many types of birds are there in the world'. The second message is from the bot, indicated by a teal circular profile picture, and contains the text: 'There are about 10,000 different species of birds in the world! Birds come in all shapes, sizes, and colors, and they live in many different habitats, from forests to deserts to oceans. Some well-known types of birds include eagles, owls, penguins, parrots, and robins. Each bird species is unique and has special adaptations that help them survive in their environments. Birds are fascinating creatures to learn about and observe!'. At the bottom of the chat, there is a teal input field with the placeholder text 'Ask Me Anything!' and a microphone icon on the left.</p>	

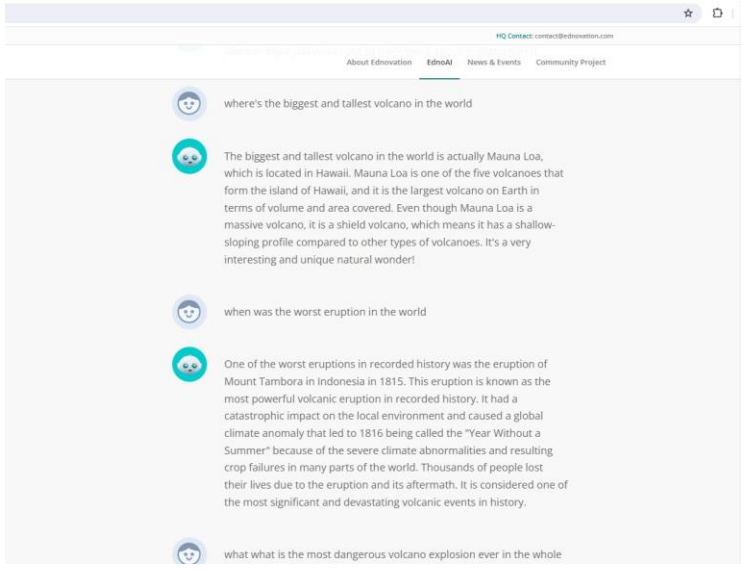
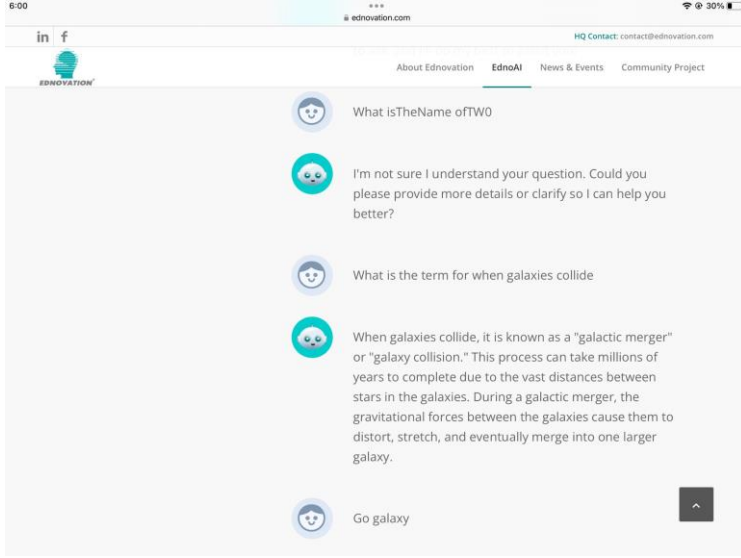
ID	Interaction log ID	Interaction log	Code
P7	P7D	 <p>15:41 WhatsApp ednovation.com — Private</p> <p>OldSixYears oldOkay hello Mr robot are you 260 years old</p> <p>Hello! I'm not actually a person, I'm a computer program created to help and answer questions. I don't have an age like humans do. How can I assist you today?</p> <p>Ask Me Anything!</p> <p>Powered by ChatGPT</p> <p>Microphone Setup: If EdnoAI does not respond to your voice, please check that microphone is activated for the browser. Here's a video on how to do it.</p> <p>15:42 WhatsApp ednovation.com — Private</p> <p>I'm just scientist okay how many type of countries are there in the world</p> <p>That's a great question, Scientist! There are currently 195 countries in the world. These countries are spread across different continents like Asia, Africa, Europe, North America, South America, Australia, and Antarctica. Each country has its own unique culture, language, and traditions. It's fascinating to learn about all the different countries around the world!</p> <p>Ask Me Anything!</p>	<p>C27: GenAI for personal interaction</p> <p>And</p> <p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C107: GenAI to express imaginative thinking</p>

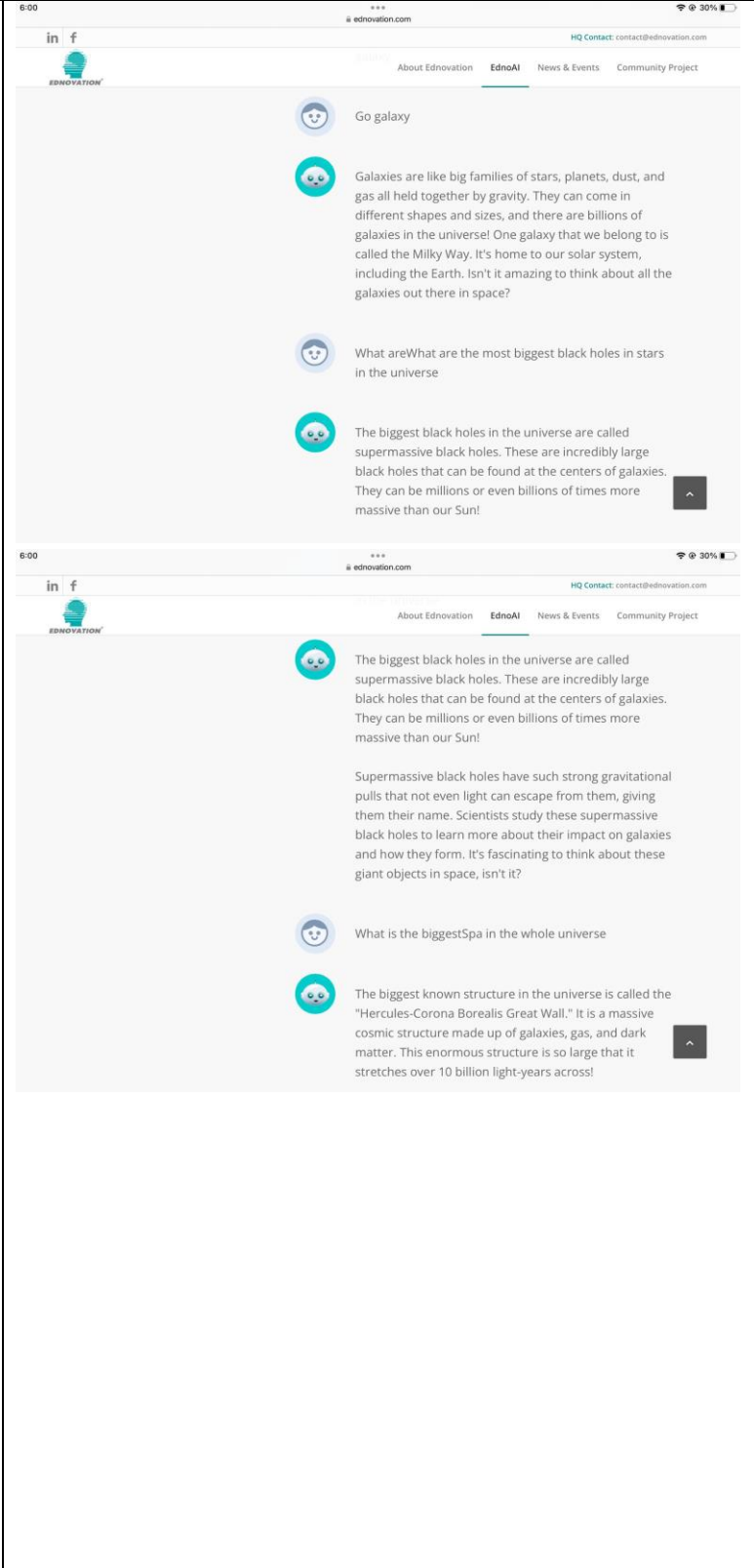
ID	Interaction log ID	Interaction log	Code
P7	P7D	 <p>The screenshot displays two separate AI chat sessions within a WhatsApp interface. Each session begins with a user question, followed by an AI response, and concludes with a 'Powered by ChatGPT' footer. A microphone setup warning is also visible between the two sessions.</p> <p>Session 1 (15:43): User: Is a Titanic boaHow long is the Titanic boa AI: The Titanic was a famous ship, not a boa. The Titanic was about 882 feet and 9 inches long, which is roughly equivalent to the length of three football fields! It was one of the largest and most luxurious ships of its time. Footer: Powered by ChatGPT</p> <p>Session 2 (15:45): User: Evolution meansTo start asking againWhat does evolution mean AI: Evolution is a really interesting idea, Scientist! Evolution is the process by which living organisms change and adapt over time to better survive in their environment. This means that plants, animals, and other living things can develop new traits or characteristics that help them live and reproduce successfully. It's like a natural way of changing and getting better suited to where you live. Evolution is a big part of how life on Earth has developed and become so diverse! Footer: Powered by ChatGPT</p>	<p>C27: GenAI for personal interaction</p> <p>And</p> <p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C107: GenAI to express imaginative thinking</p>

ID	Interaction log ID	Interaction log	Code
P7	P7D	 <p>15:46 ednovation.com — Private</p> <p>What happen if humans tattoo tattooWhatHappenedWhat happens if humans have tails</p> <p></p> <p>If humans had tails, it would be a very interesting and different from what we are used to! Tails are common in many other animals like monkeys, cats, and dogs, and they can serve different purposes like helping with balance, communication, or even defense.</p> <p>If humans had tails, we might have to adjust our clothing to accommodate them, and we might develop new ways of using them, like for expressing emotions or even for extra balance while walking or running. It would definitely change the way we look and interact with the world around</p> <p>15:47 ednovation.com</p> <p>AA</p> <p></p> <p>I'm still thinking okay Mr</p> <p></p> <p>Take your time, Scientist! If you have any more questions or if there's anything else you're curious about, feel free to ask. I'm here to help!</p> <p>Ask Me Anything!</p> <p>Powered by  ChatGPT</p> <p>Microphone Setup: If EdnoAI does not respond to your voice, please check that microphone is activated for the browser. Here's a video on how to do it.</p>	<p>C27: GenAI for personal interaction</p> <p>And</p> <p>C70: GenAI for Educational guidance</p> <p>And</p> <p>C107: GenAI to express imaginative thinking</p>

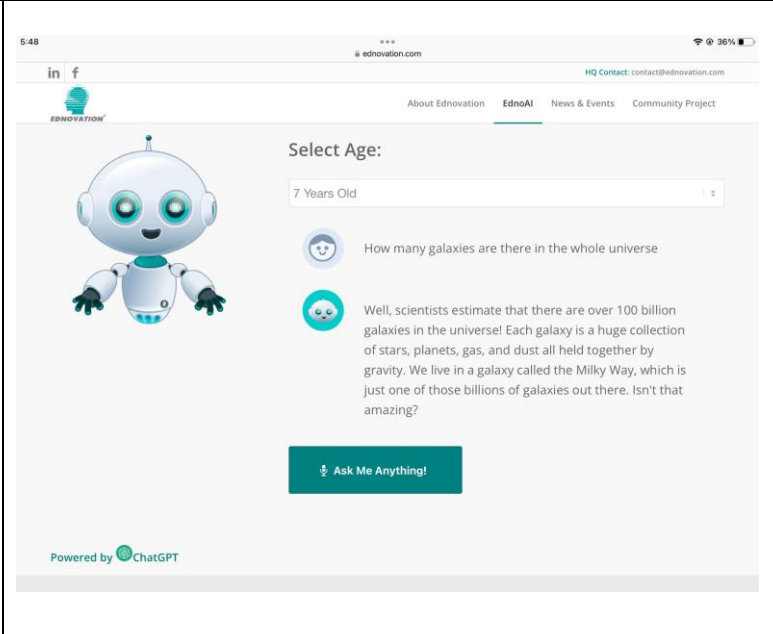
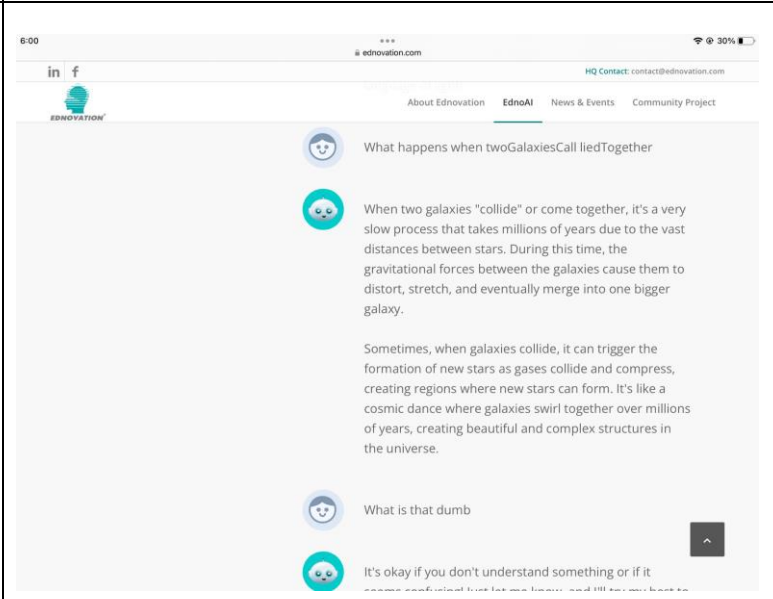
ID	Interaction log ID	Interaction log	Code
P7	P7E	 	<p>C107: GenAI to express imaginative thinking</p> <p>And</p> <p>C70: GenAI for Educational guidance</p>

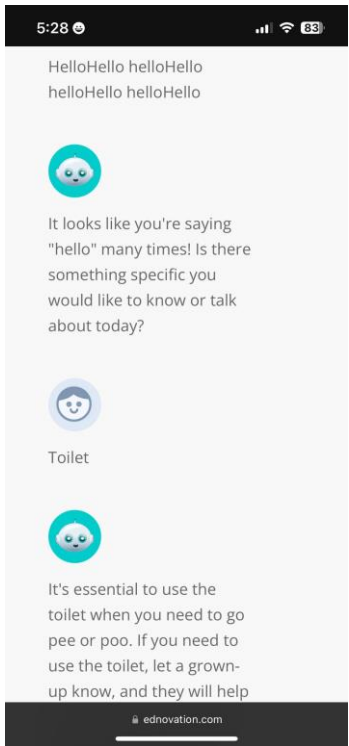
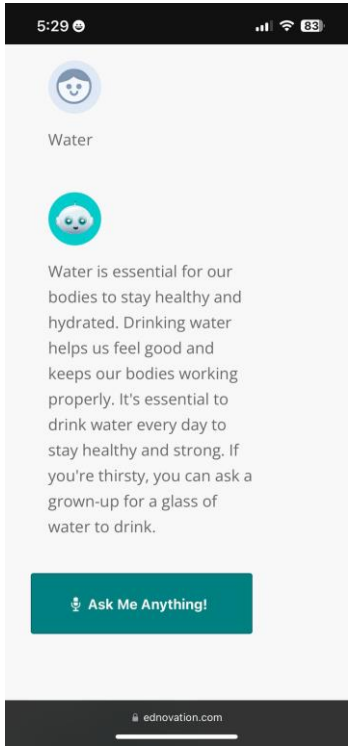
ID	Interaction log ID	Interaction log	Code
P7	P7E	 <p>19:03 ednovation.com — Private</p> <p> Is a whale</p> <p> Yes, a whale is a very large and amazing sea animal! Whales are mammals, which means they breathe air, give birth to live young ones, and nurse their babies with milk from their bodies. There are many different species of whales, such as the blue whale, which is the largest animal on Earth! Whales are known for their beautiful songs, their playful behaviors, and their impressive size. They are truly fascinating creatures of the sea!</p> <p>Ask Me Anything!</p> <hr/> <p>19:04 ednovation.com — Private</p> <p> How many types of dinosaurs are there in the world</p> <p> There were many different types of dinosaurs that lived on Earth long ago. Scientists have discovered and classified more than 700 different types of dinosaurs! These dinosaurs varied in size, shape, diet, and behavior. Some were really small, like the size of chickens, while others were huge, like the long-necked sauropods or the mighty T-Rex. Each type of dinosaur played a unique role in the ancient ecosystems they lived in. Dinosaurs roamed the Earth for millions of years before becoming extinct, and their fossils help us learn more about the history of our planet.</p>	<p>C107: GenAI to express imaginative thinking</p> <p>And</p> <p>C70: GenAI for Educational guidance</p>

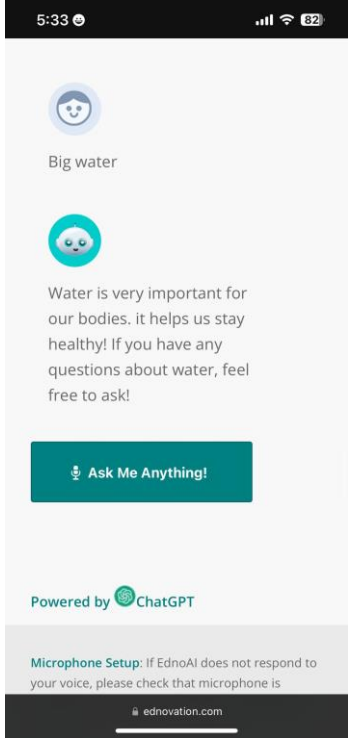
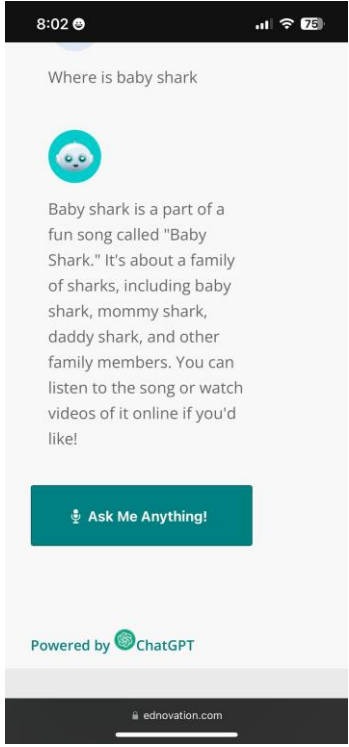
ID	Interaction log ID	Interaction log	Code
P8	P8A	 <p>The screenshot shows a chat window on a mobile device. The header includes the EdnoAI logo and navigation links: 'About Ednovation', 'EdnoAI', 'News & Events', and 'Community Project'. The chat history contains four messages:</p> <ul style="list-style-type: none"> User: where's the biggest and tallest volcano in the world EdnoAI: The biggest and tallest volcano in the world is actually Mauna Loa, which is located in Hawaii. Mauna Loa is one of the five volcanoes that form the island of Hawaii, and it is the largest volcano on Earth in terms of volume and area covered. Even though Mauna Loa is a massive volcano, it is a shield volcano, which means it has a shallow-sloping profile compared to other types of volcanoes. It's a very interesting and unique natural wonder! User: when was the worst eruption in the world EdnoAI: One of the worst eruptions in recorded history was the eruption of Mount Tambora in Indonesia in 1815. This eruption is known as the most powerful volcanic eruption in recorded history. It had a catastrophic impact on the local environment and caused a global climate anomaly that led to 1816 being called the "Year Without a Summer" because of the severe climate abnormalities and resulting crop failures in many parts of the world. Thousands of people lost their lives due to the eruption and its aftermath. It is considered one of the most significant and devastating volcanic events in history. User: what what is the most dangerous volcano explosion ever in the whole 	C70: GenAI for Educational guidance
P8	P8B	 <p>The screenshot shows a chat window on a mobile device. The header includes the EdnoAI logo and navigation links: 'About Ednovation', 'EdnoAI', 'News & Events', and 'Community Project'. The chat history contains five messages:</p> <ul style="list-style-type: none"> User: What isTheName ofTWO EdnoAI: I'm not sure I understand your question. Could you please provide more details or clarify so I can help you better? User: What is the term for when galaxies collide EdnoAI: When galaxies collide, it is known as a "galactic merger" or "galaxy collision." This process can take millions of years to complete due to the vast distances between stars in the galaxies. During a galactic merger, the gravitational forces between the galaxies cause them to distort, stretch, and eventually merge into one larger galaxy. User: Go galaxy 	C70: GenAI for Educational guidance

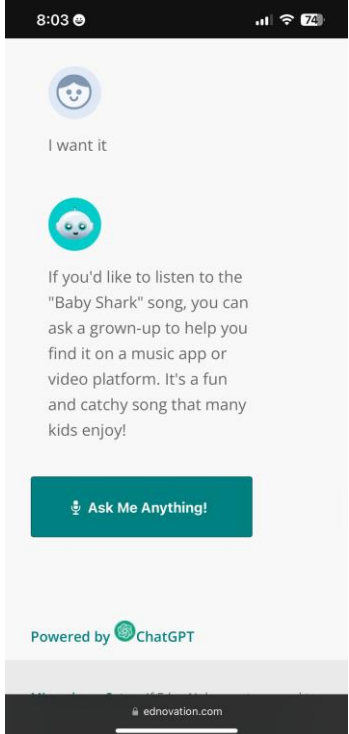
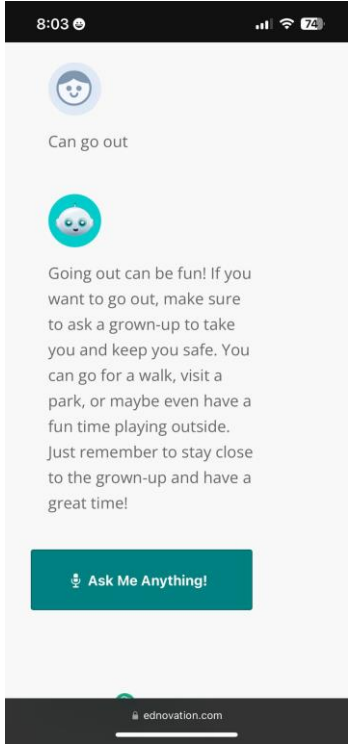
ID	Interaction log ID	Interaction log	Code
P8	P8B	 <p>The screenshot shows a mobile interface for EdnoAI. At the top, there's a navigation bar with 'in f' and 'ednovation.com'. Below that, a chat window displays a conversation:</p> <ul style="list-style-type: none"> User: "Go galaxy" AI: "Galaxies are like big families of stars, planets, dust, and gas all held together by gravity. They can come in different shapes and sizes, and there are billions of galaxies in the universe! One galaxy that we belong to is called the Milky Way. It's home to our solar system, including the Earth. Isn't it amazing to think about all the galaxies out there in space?" User: "What are the most biggest black holes in stars in the universe" AI: "The biggest black holes in the universe are called supermassive black holes. These are incredibly large black holes that can be found at the centers of galaxies. They can be millions or even billions of times more massive than our Sun!" <p>A second screenshot shows a continuation of the chat:</p> <ul style="list-style-type: none"> AI: "Supermassive black holes have such strong gravitational pulls that not even light can escape from them, giving them their name. Scientists study these supermassive black holes to learn more about their impact on galaxies and how they form. It's fascinating to think about these giant objects in space, isn't it?" User: "What is the biggest Spa in the whole universe" AI: "The biggest known structure in the universe is called the 'Hercules-Corona Borealis Great Wall.' It is a massive cosmic structure made up of galaxies, gas, and dark matter. This enormous structure is so large that it stretches over 10 billion light-years across!" 	C70: GenAI for Educational guidance

ID	Interaction log ID	Interaction log	Code
P8	P8B		C70: GenAI for Educational guidance

ID	Interaction log ID	Interaction log	Code
P8	P8C		C70: GenAI for Educational guidance
P8	P8D		C70: GenAI for Educational guidance

ID	Interaction log ID	Interaction log	Code
P9	P9A		C27: GenAI for personal interaction
P9	P9B		C70: GenAI for Educational guidance

ID	Interaction log ID	Interaction log	Code
P9	P9B		C70: GenAI for Educational guidance
P9	P9C		C84: GenAI for recreational use

ID	Interaction log ID	Interaction log	Code
P9	P9C	 <p>The screenshot shows a mobile app interface at 8:03 AM. The user's input is "I want it". The AI response is: "If you'd like to listen to the 'Baby Shark' song, you can ask a grown-up to help you find it on a music app or video platform. It's a fun and catchy song that many kids enjoy!". Below the text is a teal button that says "Ask Me Anything!". At the bottom, it says "Powered by ChatGPT" and "ednovation.com".</p>	C84: GenAI for recreational use
P9	P9D	 <p>The screenshot shows a mobile app interface at 8:03 AM. The user's input is "Can go out". The AI response is: "Going out can be fun! If you want to go out, make sure to ask a grown-up to take you and keep you safe. You can go for a walk, visit a park, or maybe even have a fun time playing outside. Just remember to stay close to the grown-up and have a great time!". Below the text is a teal button that says "Ask Me Anything!". At the bottom, it says "ednovation.com".</p>	C72: GenAI for opinion elicitation

Appendix F – Interview questions

Initial questions

- Can you share how you used the GenAI chatbot alongside your child?
- How useful did you find the GenAI chatbot to be?
- How do you think your family might integrate the use of such chatbots into your lives?

Subsequent questions

- What are your thoughts regarding your child's school using GenAI chatbots for learning?
- How do you think this type of technology will have an impact on your child's learning?
- What would you like to know more about regarding the use of such technology in your child's learning?

Appendix G - Interview statements and codes

ID	Interview Statements	Codes
P2	<p>So in general, I use a phone right? So I had the interface locked in, via one of the browsers in my phone so I showed my child. I said, you can ask this tool or this phone anything, because there was an icon. So my child automatically asked the robot. So it came from her. She said, Hi, robot! And then she asked the questions that she asked. So that was the first time, and subsequently it was the same procedure. She associated the website with a... with a robot, and asked the question, yah.</p>	<p>C1: Empowerment of child for learning C32: Child exercising learning autonomy C8: Personification of GenAI by child C38: Associating GenAI as a physical entity by child</p>
P2	<p>Okay. So I just informed her you can ask any question, right? And then ...there, thereafter she asked the questions, the one that I uploaded in the shared drive, Sharepoint of the University.</p>	<p>C1: Empowerment of child for learning</p>
P2	<p>I intervened after she asked once, I... one question. I asked her, I told her, I said, that look, you can ask other questions. What else you want to ask in relation to this first question, or the response, or in relation to other things that you want to ask, bearing in mind that, If I recall correctly... once the answer is given in text, the tool also has a voice. If I'm not wrong, right? To...you know, speak. I mean, they generated a voice of what...from text to speech, like, yah.</p>	<p>C3: Shaping child's learning experience C3: Shaping child's learning experience C3: Shaping child's learning experience C33: GenAI as an interactive user interface</p>
P2	<p>Okay, useful... I, I would say, very useful from the angle of engaging the child. Because, you know, it is intuitive right? And there is the element of interactivity between the child and the interface, that... though that did not require too much intervention for me, like as a parent.</p>	<p>C15: Positive perception of GenAI's role in learning C33: GenAI ease of use C34: GenAI as an interactive user interface C33: GenAI ease of use</p>

ID	Interview Statements	Codes
P2	<p>Yeah, the drawbacks are... is because some of the answers are very much... quite lengthy la, huh? So typically in a conversational style, right? We will have a question asked by a kid, and then a few sentences, or one or 2 or more sentence, right, to engage the child. So here it's like a typical Gen AI, you know. You ask a question, then, there is a reasonable amount of details, right? But in my view, if this was meant to be a child-appropriate kind of engagement, it could be tweaked lah so that the first answer may not be too long.</p>	<p>C36: Concerns about excessive volume of GenAI response output C34: GenAI as an interactive user interface C36: Concerns about excessive volume of GenAI response output C36: Concerns about excessive volume of GenAI response output C11: Concerns about GenAI appropriateness for age group C36: Concerns about excessive volume of GenAI output</p>
P2	<p>No, no, if images, perhaps. Because it's currently just text, right? So if there could be images to supplement the text, right? I would think a child will be more engaged and interested.</p>	<p>C42: Perception of engagement levels of GenAI response formats C42: Perception of engagement levels of GenAI response formats C42: Perception of engagement levels of GenAI response formats C11: Concerns about GenAI appropriateness for age group</p>
P2	<p>This is, yeah. Wishlist not so, because this is more of ideas, of how I think it can be more engaging. But it... research is required, right? To know whether the kid responds better to an image or the current approach where it's text. And then text to speech is sufficient to achieve a certain level of ah, interest.</p>	<p>C42: Perception of engagement levels of GenAI response formats C42: Perception of engagement levels of GenAI response formats C42: Perception of engagement levels of GenAI response formats</p>

ID	Interview Statements	Codes
P2	ChatGPT with my other kids lah, but not the 6 year old one, yeah.	C46: Experience of children with other GenAI tools
P2	<p>For life. I... I've not tried, but I thought an opportunity for my older kids would be... so think about what courses to take in their post-graduate or post-secondary education. You know, the kind of careers they want to explore in the future. I think that one is something that you know, haven't done yet, but a possibility. But more, I think, for the schoolwork. I think they're already doing some form of research, you know, doing assignment and then asking tools that... I'm not aware what exact tools are using, right? Yeah. So schoolwork and then planning for the future.</p>	<p>C49: Perception of GenAI suitability for academic as compared to non-academic contextx C6: Utility perception of GenAI C23: GenAI as a research tool C23: GenAI as a research tool C49: Perception of GenAI suitability for academic as compared to non-academic contexts C23: GenAI as a research tool C50: Not aware about how children are using GenAI for learning</p>
P2	<p>Yeah, correct, roughly, roughly, I know, but I have not engaged them and talked to them what tool they use and how to use it, or are they using it to do some sort of, you know... supplementing their schoolwork. Not, not in detail.</p>	<p>C50: Not aware of how children are using GenAI for learning</p>

ID	Interview Statements	Codes
P2	<p>I think the Generative AI chatbots are already here. Like it or not, you know. It is accessible to students. It is a basic necessity, I would think. For students to, ah sorry, for schools to teach, you know, right? The use of chatbot in their schoolwork. Not sure the extent to which it has been pervasive, or it's been maturing in the school, right? So at this stage, what I can offer is, as a opinion, is more of a...teaching how to use the tools is very important. And then, you know, in terms of based on what... it's not... the student has to be, or the students have to use it ethically, like you know whatever, technological guidelines, right? That is, set by the school, I mean, similar to, you know, in the past, there were no phones, now there are phones and laptops and all. There are certain guidelines on the usage of such technology. I would look at Generative AI in a similar vein lah. I mean they have not too long ago, but still quite some time ago, the use of Internet, such as, right, for the assignments. Yes, I think it is another tool, another resource for students to help them in their learning generally lah.</p>	<p>C51: Perceived prevalence of GenAI in learning C51: Perceived prevalence of GenAI in learning C53: Perceived compelling need for learners to use GenAI C54: Belief that schools have the role of educating learners in GenAI use C18: Perception of GenAI immaturity C54: Belief that schools have the role of educating learners in GenAI use C55: Concerns about ethical use of GenAI C10: Concerns about stakeholder regulation of GenAI use C56: Comparison of GenAI to past technologies C55: Concerns about stakeholder regulation of GenAI use C55: Concerns about ethical use of GenAI C56: Comparison of GenAI to past technologies</p>

ID	Interview Statements	Codes
P2	<p>Well, if doing so allows them to focus on teaching and to reduce admin work, and they can have better work-life balance, I'm very, very supportive of it lah. So there are few angles, right? One is the angle of quality of content, right? That one, if through Gen AI, the quality of teaching materials and content can be much, much improved, by all means! Second, from the angle of the well-being and you know, productivity of the teachers. Yeah, why not, right? So I think it's important. I think thirdly is also... how it could be a, a stepping stone, right, for kids of the preschool age ah, to be familiarized with such technology and to, you know, have the first glimpse and first engagement with the tools and technology, so that by the time they go to primary school, and beyond, it will be part of their, you know, a repository or their toolbox, in learning.</p>	<p>C57: GenAI increasing educator efficiency C57: GenAI increasing educator efficiency C58: GenAI increasing educator welfare C15: Positive perception of GenAI's role in learning C59: GenAI enhancing learning content quality C59: GenAI enhancing learning content quality C58: GenAI increasing educator welfare C57: GenAI increasing educator efficiency C60: GenAI as an early advantage for young learners C60: GenAI as an early advantage for young learners C60: GenAI as an early advantage for young learners C61: GenAI as part of skillset for young learners</p>

ID	Interview Statements	Codes
P2	<p>Well, I... personally, I... if you, if you ask me right, I don't really have a concern or... a opinion. I mean, if that's the latest technology, you know, that is required to achieve the minimum standards of school, right? Then it's a given, right? It's a given that... the ... just like, how students, I mean, teachers use Google search engines. You know, software, you know, to design materials, then, is just another one in the whole, you know, teaching tools are, right? Toolbox for them to create class, create content? Perhaps they might be using it. I mean, case in point. A couple of days ago my daughter talks about how the teacher, you know, shared with them examples are of “Kampong”, you know. Then, from the way she described, ah, it's so detailed and so vivid to the... that I half-suspect that, either the teachers are very skilled or they have a central team that does the materials, or it could be, well be they have used Gen AI to create images, or to do lesson plan, ah, right? So it may well be already implemented, but just parents are not officially involved, or informed, sorry.</p>	<p>C67: Indifference regarding how schools can partner caregivers in using GenAI for learning C16: Progressive views on technology for learning C63: Perception of minimum educational standards C23: GenAI as a research tool C64: GenAI as a learning design tool C64: GenAI as a learning design tool C64: GenAI as a learning design tool C65: Perception of GenAI output as having high quality C64: GenAI as a learning design tool C51: Perceived prevalence of GenAI in learning C19: Concern regarding how schools can partner caregivers in using GenAI for learning</p>
P2	<p>Doesn't really matter to me, lah. What's more important is the output and outcome. Not necessarily the process. Yeah.</p>	<p>C67: Indifference regarding how schools can partner caregivers in using GenAI for learning C68: Prioritising learning outcomes over processes</p>

ID	Interview Statements	Codes
P2	<p>Yeah. So I would say that from the level of sophistication, of engaging the materials, right? That is number one, ah. Here's, here's what's on my mind, right? If without Gen AI, the between 1 to 10, the quality of materials in terms of thoroughness, in terms of relevance, in terms of even child appropriateness is, say, a level of 5 or 6 ah, right? Here bearing in mind that I would, I would expect any preschool teachers to be, you know, at least trained in early childhood at the certificate level, meaning that the kind of materials that they choose right? They've already gone through the process, that it's child-appropriate, the languages that they use is, you know, contextualized to the needs of the child. Right? But with Gen AI they're able to up their ante to increase their skills and competency level to the extent that the materials of teaching and even the mode of teaching right goes up to 7 to 8. Right? Yeah. So it means that parents will expect more, right? That is a given, that you are able to produce this kind of content. And this kind of classroom teaching... facilitation or teaching, I would say, design, right? Yeah. Compared to the past, I mean, compare our time Dulu in, in, in school, right? We have the OHP right? No normal OHP, you know, it's Powerpoint. So that's a certain standard expected of Powerpoints. So now, with Gen AI, I would think the standards of teaching and content will be much higher than before.</p>	<p>C59: GenAI enhancing learning content quality C59: GenAI enhancing learning content quality C12: Affirmation about GenAI appropriateness for age group C59: GenAI enhancing learning content quality C69: Expectation of educators being qualified C71: Preparation of learning materials C71: Preparation of learning materials C71: Preparation of learning materials C71: Preparation of learning materials C57: GenAI increasing educator efficiency C57: GenAI increasing educator efficiency C59: GenAI enhancing learning content quality C59: GenAI enhancing learning content quality C59: GenAI enhancing learning content quality C59: GenAI enhancing learning content quality</p>

ID	Interview Statements	Codes
P2	<p>The technology. I'm not.....not so many questions. But I am interested to know what is the pathway for teachers in the future. Back to my other point of standards ah, right? So if today, this is the standards of teaching in terms of what I've said just now, with Gen AI there's a boost, right? There's a injection of, you know, a whole new way of doing things. What do we, as parents, or, as you know, general public ah, expect of teachers, you know. Yeah. So I won't say teachers alone. I think it's not fair to just put it on teachers. Of educational institutions in having their materials and their whole pedagogy and curriculum, develop you know, with the AI incorporated ah.</p>	<p>C73: Concern about educator skills and knowledge C59: GenAI enhancing learning content quality C59: GenAI enhancing learning content quality C73: Concern about educator skills and knowledge C74: Acknowledgement of other stakeholders regarding GenAI for learning C74: Acknowledgement of other stakeholders regarding GenAI for learning C74: Acknowledgement of other stakeholders regarding GenAI for learning</p>
P2	<p>So that I know what I'm paying for quote, unquote in terms of taxpayer, in terms of materials, you know. I mean fees lah, right? Yeah. I mean, this should be my last kid in, in kindergarten. But I, I, If I were to rewind 10 years ago, right? I got 3, 4, 5 kids in kindergarten. You know I pay for classes, for private centres, and tuition and all right? If, let's say, those thing that they do can be done, you know, at a much cheaper price, but they are charging me so high a premium in the past, it's no longer a premium now ah! So that is a practical consideration actually, yeah.</p>	<p>C76: Expenditure for child's learning C76: Expenditure for child's learning C77: GenAI reducing costs of learning resources C77: GenAI reducing costs of learning resources</p>

ID	Interview Statements	Codes
P4	<p>So the initial part, I actually just let him ask any questions that he wants. So if you actually look at the screenshots like a lot of it is like, he's jumping like from topic to topic. So there's no like, theme or anything like that. But then, when, after we did it for a few times. I actually tried to steer it a little bit.</p>	<p>C1: Empowerment of child for learning C2: negative perception of learning as diverse and having variety C2: negative perception of learning as diverse and having variety C3: Shaping child's learning experience</p>
P4	<p>Like if let's say, he asked like a question about let's say, the sun. And then I'll try to steer it and say like, Oh, do you wanna ask something about the moon or something else about space? Or do you wanna ask like the distance of the sun or the size of the sun, something like that? Like initially, it was really haphazard. But then subsequently, I, I tried to steer it a bit.</p>	<p>C3: Shaping child's learning experience C2: negative perception of learning as diverse and having variety C3: Shaping child's learning experience</p>
P4	<p>Cause I was hoping that if, let's say, he asked like one question about specific topic, I was hoping that if I can steer him. Then he can learn more about the topic within that one section instead of, you know, like there's no theme, is, it? Feels a bit like, like you're just learning about different things, like at the same time. But you know, like, I was hoping there's like some kind of like flow. Which is why I tried to steer him a bit on some of the sessions.</p>	<p>C3: Shaping child's learning experience C4: GenAI for educational requests C2: negative perception of learning as diverse and having variety C2: negative perception of learning as diverse and having variety C3: Shaping child's learning experience C3: Shaping child's learning experience</p>
P4	<p>I didn't tell him like, Oh, let's talk about animals today. Let's talk about food today. I just let him ask the first question.</p>	<p>C1: Empowerment of child for learning</p>
P4	<p>So, depending on what question is, let's say it's about animals. Then, you know, then I was sort of steer like, within the animal. The theme of animals. But the first question is always, he is the one who decides what the topic is.</p>	<p>C3: Shaping child's learning experience C1: Empowerment of child for learning</p>

ID	Interview Statements	Codes
P4	<p>I think that was very, it's very good. Cause, I mean, my, my son is very, very curious. He has a lot of questions. In addition, he can ask me a lot of questions about many different things. So I think he was always looking forward to like, every time I will, I'll say like, Oh, let's go talk to Edno cause he calls it Edno right, and not AI right. Like he will get very excited like, Oh, okay, I have this question to ask, Edno. And the things like that. So yeah, that was my experience with the question was like, how, how do we find? How do I find it? Right? Like.</p>	<p>C15: Positive perception of GenAI's role in learning C25: Perceptions of child's learning behaviours C7: Enjoyment of GenAI usage by child C8: Personification of GenAI by child C7: Enjoyment of GenAI usage by child C8: Personification of GenAI by child</p>
P4	<p>Yeah, yeah, I think it's useful, although I did have like a concern when I was like doing it. Cause there was one part where my son actually wanted to do math. So he was like, Oh, 100 plus 100! How much is it? And then I sort of had this concern like, Oh, was it like, you know, in the future, if, like kids use this, will it become a like a crutch, like a handicap, a crutch, or a handicap. Like they will, you know, instead of like finding answers on their own like, say, for example, 100% that they can use it to do their homework instead of like thinking out all the methods. And I don't know what's the management for that.</p>	<p>C15: Positive perception of GenAI's role in learning C9: Concerns about excessive dependence on GenAI C9: Concerns about excessive dependence on GenAI C9: Concerns about excessive dependence on GenAI C10: Concerns about stakeholder regulation of GenAI</p>
P4	<p>Like, like, I wonder if the response is going to, like, steer towards like sexual reproduction, and I feel like he's a bit too young for that. But it wasn't like the response was actually a bit more generic. It just says that...let me see. It says that human babies are from inside a special place called the mother's womb, like, like it was a bit more generic. But, and, that is like my son. After he got the answer he moved on to something else, so I don't know whether, if he had continued that line of questioning, whether, like eventually, the response will become like, you know, oh, sexual reproduction da da da. So I think there was like a bit of concern there.</p>	<p>C11: Concerns about GenAI appropriateness for age group C11: Concerns about GenAI appropriateness for age group C12: Affirmation about GenAI appropriateness for age group C11: Concerns about GenAI appropriateness for age group</p>

ID	Interview Statements	Codes
P4	<p>I mean, I don't know whether ... how it's set up. But I realized that like, okay, like. For example, he actually asked a question about how fast is Lamborghini or sports car? Something like that. So I realized that the answer given right, the system of measurements, right, is actually use the American system, which is the imperial system, right? As opposed to, like, a metric system. So I don't know whether, like you know, if in the local Singapore context we use metric system. But then the answers given is like in the American imperial system.</p>	<p>C13: Not aware about mechanism of GenAI C66: Concerns about GenAI output appropriateness for local context</p>
P4	<p>Honestly, I would continue using it. I mean, my son actually does say that, hey? Oh, can I still talk to Edno, even though, like we were supposed. I, I told him that we were done already like with the whole project, but he was like, Oh, can I still ask, Edno and say, Yeah, sure, I, I mean, it's it's open, right? Like I can still use it with him. Right? Yeah, I probably use it. I'll probably use it. When he asked me the questions. I don't know the answer to.</p>	<p>C29: Optimism of future utility of GenAI C8: Personification of GenAI by child C8: Personification of GenAI by child C29: Optimism of future utility of GenAI</p>
P4	<p>So I guess I mean, I can probably use this, like, as a starting point, like, if he has any questions, I can probably like, Okay, like, let's ask it. No. But then, if he wants more information like, Oh, he wants to, because sometimes he likes like visual things. He wants to see a video. So he'll ask me, can I see a video of this or that, you know. So I probably use it more of like, you know, like, how sometimes we use all Wikipedia as like a starting point, and then you branch off your research from there. Right? So I'll probably use Edno that way like more of like a starting point and branch off to something else. After that.</p>	<p>C14: GenAI as a learning catalyst C14: GenAI as a learning catalyst C14: GenAI as a learning catalyst C14: GenAI as a learning catalyst</p>

ID	Interview Statements	Codes
P4	<p>I mean, I'm, I mean right now. They don't have any form of AI in their learning tools or whatever. But I mean, if let's say they decide to do it. I mean, I'm totally open to it. I think it's good to embrace, like, new technologies. As long as I feel like this like safeguards in place like, like, you know why I mentioned like oh, like, in case like the response becomes like sexual reproduction, which I think he is too young for at the moment. But yeah, I mean, I'm, I'm definitely open to AI in like classrooms.</p>	<p>C15: Positive perception of GenAI's role in learning C16: Progressive views on technology for learning C23: Advocating for supervised used of GenAI in learning C11: Concerns about GenAI appropriateness for age group C15: Positive perception of GenAI's role in learning</p>
P4	<p>I mean the school that my son is currently at like, they only just started like having the app to update like the parents with, like all the updates and all that. And they're still like figuring it out, so I think there's ... I don't know whether they will do AI anytime soon.</p>	<p>C17: Concern regarding school readiness for GenAI adoption C17: Concern regarding school readiness for GenAI adoption C17: Concern regarding school readiness for GenAI adoption</p>
P4	<p>And they explain how, like, they do, like, the everyday like teaching and all that. And there's no AI tool.</p>	<p>C93: Child is not using GenAI for learning in school</p>

ID	Interview Statements	Codes
P4	<p>No, I mean, I don't know honestly, I feel like it's still a bit new. So I don't really know whether teachers or principals are required to ask for permission, or even to notify parents. But I would think that if if you want to integrate AI into like the learning tools and all that, or even to like, you know, like exam questions. I feel like it's something that you, you need to inform parents. I mean just just to know. It's not, it's not, it's not like, Oh, you need to seek approval or consent, but I feel it's good, as a good, good to know. It's more of like a good to know.</p>	<p>C18: Perception of GenAI immaturity C19: Concern regarding how schools can partner caregivers in using GenAI for learning C30: Advocating how schools can partner caregivers in using GenAI for learning C19: Concern regarding how schools can partner caregivers in using GenAI for learning C30: Advocating how schools can partner caregivers in using GenAI for learning</p>
P4	<p>I don't know if I have like a concrete answer for this, because I feel like I I feel like every time there's new technology. And it's still very new. There's always like this.... I don't know whether it's rational or irrational worry like it's gonna turn into something else like it's, it's not gonna be good for our kids, you know, something like that. So I don't really have, like, a concrete answer for that. But I think it's more of like just a general worry that you know, like, oh, they're gonna like, set questions or get our kids to use it, and then like with like, with free rein, without any like supervision, and things like that. So at least, if you are aware that oh, they're using the idea. At least you know, if there's any like, like you look at the question, and then you realize something, and then you can like, bring it up to the teacher, or you need to make sure that when your kid uses the AI in school like, like they use it with caution.</p>	<p>C18: Perception of GenAI immaturity C20: GenAI educational risks and safeguarding C20: GenAI educational risks and safeguarding C21: Concerns about unsupervised GenAI use in learning C22: Advocating for supervised use of GenAI in learning C20: GenAI educational risks and safeguarding</p>

ID	Interview Statements	Codes
P4	<p>I feel that is good, I mean, like, honestly, I, I don't know how like, you know, people like the, the, the people before us. How they did their research like for us that you know, we have Google, like, how did it? I don't know how like people before us did their research, their learning like, now, we're so like, you know, growing up, we were so used to like using Google using Wikipedia. So I feel like, that it will always be a good thing. Right? It's just that...I, I like... I, I keep mentioning that I think the only concern is that oh, making sure there's safeguards, solutions, like, you know, like, it doesn't turn into something bad.</p>	<p>C15: Positive perception of GenAI's role in learning C23: GenAI as a research tool C23: GenAI as a research tool C56: Comparing of GenAI to past technologies C15: Positive perception of GenAI's role in learning C22: Advocating for supervised use of GenAI in learning C20: GenAI educational risks and safeguarding</p>
P4	<p>So yeah, I feel like in the future, I'd be happy for my son to use AI in school in his, in his classes. Yeah. And I think it's useful for someone like him, cause he's...he... like I said, he always asked a lot of questions which I don't know the answers to, honestly. Like something he asked. Things like which are like, science-based or maths-based, and I'm not good at it, so I feel like it's a good resource for him like in the future, even.</p>	<p>C15: Positive perception of GenAI's role in learning C24: Perceptions of GenAI matching child's learning needs C25: Perceptions of child's learning behaviours C26: Acknowledgment of own limitations in guiding child's learning C26: Acknowledgment of own limitations in guiding child's learning C4: GenAI for educational requests C29: Optimism of future utility of GenAI</p>

ID	Interview Statements	Codes
P5	<p>Okay. So my child has actually been playing with Siri on the phone quite a bit. So the Generative AI bot was quite intuitive for them but one because they've had prior experience with Siri. That was done sort of like, recreationally or informally. So it sort of primed them into how they would like to use the AI.</p>	<p>C78: Child's prior experience with AI tools C33: GenAI ease of use C84: GenAI for recreational use C79: Perception of child's ease due to prior experience with GenAI</p>
P5	<p>So with Siri, they actually...with AI and other forms of like, Siri and other forms of AI, they would generally don't really have much of an agenda, and they just want to test out the capacity of the tool.</p>	<p>C25: Perception of child's learning behaviours C25: Perception of child's learning behaviours</p>
P5	<p>So, for example, with Siri, they often ask you to show them pictures of certain things they're interested in. But with this particular tool it didn't, it couldn't show pictures. So I think that showed me that they were actually just exploring the technology and didn't really much have...and it didn't have much of an agenda.</p>	<p>C80: AI for educational requests C25: Perception of child's learning behaviours C25: Perception of child's learning behaviours</p>
P5	<p>Yes, I did so. I wanted to sort of steer them to more productive outputs. So I, when they were using it, I said Oh, how about...you look for ways to help you do things better, or why don't you find out more about certain things?</p>	<p>C3: Shaping child's learning experience C3: Shaping child's learning experience C3: Shaping child's learning experience</p>

ID	Interview Statements	Codes
P5	<p>So some of my suggestions took off, and I did ask one or 2 questions about... I think if I'm not wrong, nature or the environment but once they were done, they were back to the usual like, Oh, pokemon! And whatever... so... and there was some prompts that I suggested that totally didn't interest them. For example, "How can you ask us, the AI to teach you how to learn better or pay attention in class?" And these were things that didn't interest them. And so they didn't even want to like give the prompt.</p>	<p>C3: Shaping child's learning experience C25: Perception of child's learning behaviours C3: Shaping child's learning experience C82: Child preferences for prompts</p>
P5	<p>Hmm. I thought that in terms of...the language...per se, that is actually more useful. So I mean, there are many options out there, but this one being tailored to children the way it put out the explanation was actually more accessible to children, so I thought that was good. If there was like a piece of homework, for example, that they need to work on. You know, a little bit more constructive but as a parent. I'm still a little bit cautious about teaching them use... to use AI to do work and do.. do research. I think...even though I think, largely, because of their age. So they're younger.</p>	<p>C12: Affirmation about GenAI appropriateness for age group C12: Affirmation about GenAI appropriateness for age group C83: GenAI as homework helper C11: Concerns about GenAI appropriateness for age group</p>
P5	<p>And because the.. type of research tasks...that they have been asked to do usually are very factual. So with AI is too efficient, and it doesn't sort of...address, the need to go through the process of the research. So I think even though it's more efficient. And we... I would teach, like an older child to use it. But for the younger child, I feel like they might still need to go through the motions of you know... maybe looking up the dictionary or flipping books, or just, you know, engaging with the material...at greater length.</p>	<p>C85: Nature of child's schoolwork C86: Apprehension about GenAI's perceived efficiency C20: C20: GenAI educational risks and safeguarding C11: Concerns about GenAI appropriateness for age group C11: Concerns about GenAI apropiacy for age group</p>

ID	Interview Statements	Codes
P5	<p>Okay, I think first...I think for me, I don't believe in giving children quick answers. So sometimes I do want to like, ask them to think about the process, think, why infer, and things like that. So if they like, fall back on AI too easily, I feel that they lose the opportunity to develop their own thinking and their own sort of observational skills.</p>	<p>C89: Beliefs about learning processes C89: Beliefs about learning processes C9: Concerns about excessive dependence on GenAI</p>
P5	<p>So I think that's something that I'm cautious about and especially this, some. This is like the stage of development where these like structures, you know, and thought processes are part of, you know... essential to... to their cognitive development. So I'm a bit cautious of that. As time goes by, perhaps...when pressed for time. For example, I mean, there's a lot of work to do, and I need to get them the answer very efficiently, or perhaps some of it is not. Sometimes, you know, there are other concerns, say, for example, they're badgering me with...Why is this? Why is the sky blue and all that, and I'm not particularly like sort of...invested, you know, at that moment to go through the the cognitive process with them, I might say, Okay, why don't you ask Siri? And you know, find your own answers? So I think it depends really on the agenda and the, the task at hand.</p>	<p>s C20: Concerns about excessive dependence on GenAI C89: Beliefs about learning processes C91: Willingness to compromise in spite of negative perceptions of GenAI C91: Willingness to compromise in spite of negative perceptions of GenAI C91: Willingness to compromise in spite of negative perceptions of GenAI C91: Willingness to compromise in spite of negative perceptions of GenAI C91: Willingness to compromise in spite of negative perceptions of GenAI C91: Willingness to compromise in spite of negative perceptions of GenAI</p>
P5	<p>I think I think with learning right, it comes in like a flux. So, for example, I think with...at this... I, I feel at this age, I want to train them in terms of like, cognitive development, right? Observation, inference...2 examples I raised earlier. So this will be the point, but when they're older they will still need to infer and observe. But the level and the difficulty of the task would increase, right?</p>	<p>C89: Beliefs about learning processes C89: Beliefs about learning processes C89: Beliefs about learning processes C89: Beliefs about learning processes</p>

ID	Interview Statements	Codes
P5	<p>So, for example, when they're very young now, they will ask me question "Oh, why? Why do you need traffic lights?" you know? Why is the bus so big. And some of these questions, you know, with with a little bit of thought, they could have actually derived the answer on their own. So I think if I feel that you know this is a difficulty, the, the answer can be obtained within their like reasonable, like age limit. I would ask them to think on their own. And if it's beyond their ability or there's, I feel like there's no contextual clues. Or...then I might direct them to the AI.</p>	<p>C89: Beliefs about learning processes C89: Beliefs about learning processes C89: Beliefs about learning processes C89: Beliefs about learning processes C91: Willingness to compromise in spite of negative perceptions of GenAI</p>
P5	<p>Well, I think it's mostly parents, to some extent teachers but I can't really monitor what goes on the classroom. And I'm sure you know the teachers have their own like training and agenda, so I mean we'll leave it to, to them, to...you know. Be the sub to the... be the expert in whatever they're doing. So I think, as far as I'm concerned. That's just... I just control what's within my realm of info.</p>	<p>C26: Acknowledgment of own limitations in guiding child's learning C92: Acknowledgment of autonomy and expertise of educators C92: Acknowledgment of autonomy and expertise of educators C92: Acknowledgment of autonomy and expertise of educators C26: Acknowledgment of own limitations in guiding child's learning</p>
P5	<p>No, not not really. I don't really see what's going on in the classroom. To be honest, not for my children.</p>	<p>C50: Not aware about how children are using GenAI for learning</p>
P5	<p>Okay? So I think I answer, the first part of your question first, do I think my 7 year old is being coached on AI. Not yet, because the, the last computer lesson they had was touch typing, the first one was entering your password. The second one was touch typing. So I think they are still way too young, and the teacher has not reached that point yet.</p>	<p>C93: Child is not using GenAI for learning in school C94: perception that child is too young to use GenAI for learning in school</p>

ID	Interview Statements	Codes
P5	<p>Let's say, I think that almost every other child these days has, like, some kind of like, AI enabled tool at home. So I think many... prior to this, even in preschool my kids have access to Tian Mao Jing Ling is a China Ali... Ali ex... Ali...Alibaba. Is it? Is that a company? the Taobao company, the, the AI. And I just bought one of their speakers so they can request for songs, and you know, weather and things like that. So I think there was um... my exposure to language learning through AI, so that one, some of it's incorporated at home. I'm sure other people have Alexa and other things. So that's the first part of your question. A second part of my question is that... of your questions. As educator... I've been given a green light to use AI in the classroom, and I think... I have used it.</p>	<p>C95: Children using AI tools at home C95: Children using AI tools at home C97: AI tools for language learning at home C95: Perception that most children have AI tools at home C96: Educators have leeway to use GenAI tools for teaching</p>
P5	<p>And in fact, when I tell the students like, Oh, this is very straightforward. That's just ChatGPT. And the, the students are surprised that... “you mean you can?” and I teach them the prompt like... Oh, you can tell the AI to stop yapping. So which is...and it actually responds to Gen Z lingo like, stop yapping, and it will give you a concise version and the students are like amused by it. They will use it. And some of the older kids I've seen have put in, “Make it simple.”</p>	<p>C33: GenAI ease of use C98: Teaching of GenAI prompts by educator C99: Personification of GenAI by caregiver C99: Personification of GenAI by caregiver C100: GenAI as summary tool C101: GenAI to simplify content</p>

ID	Interview Statements	Codes
P5	<p>And then, of course, their, their agenda is to like, outsmart the teacher by saying that. “Oh, you know, if you use all this fancy vocabulary, the teacher will know you didn't do it”, so you have to... They coach AI to like, simplify the answer so that it will seem like it's student generated work. So I think all of that is something that we need to keep in our stride. But as a teacher I feel like, the challenge is then to make the task more demanding or more challenging. So personally, I would actually think about AI, but like, when I said AI related tasks, I would actually set some portions or some aspects of it which AI cannot provide the answer for. So there will be some part that's basic. So, so this is what I will do to sort of work with AI, yeah.</p>	<p>C101: GenAI to simplify content C101: GenAI to simplify content C102: Belief in compromise when using GenAI for teaching C103: Advocacy for rethinking task design in response to GenAI C103: Advocacy for rethinking task design in response to GenAI</p>
P5	<p>Depends on the, the, the expertise of the teacher. So now there are some, like, AI to help. I know that on SLS, as a new feature, that is like automated marking for math. So after the teachers put in the answers it will generate certain patterns and all that, and I think that that's very productive. If the teacher is a skilled user, you can like, send out targeted practices for the kids. That's, I mean, if the teacher is using that, I'll be very pleased if the teacher is doing that. But if I mean in the hands of a less skilled teacher... I think there are still many teachers who don't have faith or are...have not quite caught up with using AI, so they will actually set boundaries and limits on students like, oh, you're not allowed to do this, or you have to use certain tools. And I think that...some, I think it depends on how old a kid is. For my child, who's in primary one, I will be willing to go with the teacher.</p>	<p>C73: Concern about educator skills and knowledge C105: AI as automarking tool C106: AI increasing educator efficiency C73: Concern about educator skills and knowledge C57: GenAI increasing educator efficiency C73: Concern about educator skills and knowledge C73: Concern about educators skills and knowledge C109: Willingness to compromise in spite of negative perceptions of GenAI</p>

ID	Interview Statements	Codes
P5	<p>Because, like I said earlier on, you know. Sometimes the teacher require them to just flip the book, you know, be familiar with the material, and that might be the teacher's, like, second, like, you know, part of the teacher's agenda. So I think I will be fairly supportive, I think. Even if the teacher doesn't use AI or uses in a, like a, in a counterintuitive way.</p>	<p>C110: Beliefs regarding some educators not using GenAI C109: Willingness to compromise in spite of negative perceptions of GenAI C110: Beliefs regarding some educators not using GenAI</p>
P5	<p>Well, I know that the teachers, at least as far as the Primary One is concerned, my Primary One child is concerned... The teachers does some... issue some SLS lesson, and that kind of thing. I think what I would.... I'm concerned about is the degree of parental involvement teachers expect on these HBL days. So when I look at some of the responses and the expectations, it... it's almost as if the teacher is expecting an adult to sit beside the child, to read all the instructions for the child, and to like, do the typing for the child, which I think really defeats the purpose of self-directed learning. So to me, that's a question mark on how the technology is used. On the other hand, later on, let's say, for example, my child puts in some responses.</p>	<p>C112: Concern about expected level of caregiver involvement in homework</p>
P5	<p>I don't actually see the teacher feedback on SLS. So with worksheets and things like that, I get to see the teachers mark it. Things are correct or wrong but with SLS, I...it's a kind of like, a black hole for the parents, and also I don't get any feedback on, let's say, for example, the teacher says, practise this, this, this. I don't know if these, like, practices, whether my child has gotten it correct. If there's anything I need to follow up on, and etc. So I think in terms of feedback loop...The hard copy traditional is more complete versus the electronic ones at the moment.</p>	<p>C113: Concern about perceived lack of educator feedback on child's work</p>

ID	Interview Statements	Codes
P5	<p>Hmm! I think that's...I think, as a parent I feel that as of now...E-pedagogy...from what I observe..is...it's...there's really no comms with the parents on what happens on the... on the E-Ped. Yeah. So I think for that...you know, I would love to be able to see sort of like a progress report, that sort of things, you know, like, yeah.so...or you know, or some, I...I wish the AI can consolidate the data and send it out to parents individually. Yeah. So that's what I hope to receive as a parent.</p>	<p>C114: Concern on lack of communication with parents regarding pedagogical-technological practices</p>
P5	<p>Yeah. So, say, for example, a typical SLS has like exercises, right? Fill in the blanks or something like that. So this the child puts it in. But I would like to know, say, for example...what a good answer is like, what a weak answer is like. Perhaps if let's say, if it's a unit where your child is particularly weak at subtraction of double digits. you know, then you know, the data can see, like, okay... relative to your peers, you know. Your child is very weak at, you know, multiplication or certain like topics. So I think that that will help me as a parent to focus my energy on, you know, remediating gaps, you know, rather than just...yeah, I think that will supplement the hard copy.</p>	<p>C111: Suggestion on how learning data can be used to help caregivers decide how to help their children</p>
P5	<p>I feel like Generative AI breeds a certain laziness like I said. So this is me speaking as an adult who has... who uses Generative AI, I think it becomes like a crutch. and as much as we've... we need to learn how to like, analyze the data and things like that. It, although it speeds things up, it also in a way, limits creativity to a certain extent, like, so I say, for example, yeah.</p>	<p>C9: Concerns about excessive dependence on GenAI C88: Caregiver identifies as a GenAI user C9: Concerns about excessive dependence on GenAI C89: Beliefs about learning processes C20: C20: GenAI educational risks and safeguarding</p>

ID	Interview Statements	Codes
P5	<p>So I feel that in terms of learning, it can go both ways. Either the child is less confident in being independently like, generating ideas without the help of technology. Er...alternatively, the learning demands would be so difficult that, you know, you know, in the past we used to be able to get past education system just by memorizing and regurgitation, right? We hated it.</p>	<p>C9: Concerns about excessive dependence on GenAI</p>
P5	<p>Looking back is so much easier than saying, now the children are expected to generate and infer so, which is good like it's more like a higher order, but is more challenging as well. So with Generative AI... the natural development is that it requires gen...like at a higher, the highest level is originality and creativity. So how can you outgenerate AI that has access to so much information? And you know, would it be a situation where we feel like there's nothing new under the sun, because Generative AI is able to scour every single bit of information on the Internet in different languages, such that you will never be able to outdo technology. So I feel like, that's the worry I have as a parent.</p>	<p>C81: Perception of expectations of child in contemporary learning C81: Perception of expectations of child in contemporary learning C5: GenAI's information-processing abilities C5: GenAI's information-processing abilities C79: Concern about children not being able to outperform GenAI in terms of providing content</p>
P5	<p>I am quite technology-resistant, actually, at home. Like, I don't use Internet of Things very much at home. Because I'm old fashioned like that. I know. I think that dolls last longer than remotes, and when you have a lot of fiddly electronics, these things will break down easily. So I'm old school like that.</p>	<p>C121: Self-perception of being technology-resistant C121: Self-perception of being technology-resistant C48: Belief that technology is not physically durable C121: Self-perception of being technology-resistant</p>

ID	Interview Statements	Codes
P5	<p>But recently I came across this person who uses Generative AI to hone her child's self-directed motivation. So, she... so this, this parent, this is person is like a ADHD coach. So she uses Alexa to coach her son to set timers for himself. So she uses AI to... for life skills. So she will say, like, you know "Now, set a 20 min timer for me to do this", you know. "AI remind me to do this in 20 min", or "give me a 5 min pre-warning". So this... it's sort of like, a easy way to help her ADHD child to structure and and self-manage. So I thought that was interesting, and that's at the back of my mind. I'm wondering whether I should yield and bring in...you know, gener... like technology, AI, you know, and some of these devices into my home so that we can work towards self-management and improve self-management.</p>	<p>C31: GenAI as self-management tool C35: AI as self-management tool C125: Willingness to compromise in spite of negative perceptions of GenAI C31: GenAI as a self-management tool</p>
P5	<p>Not, not particularly. Yeah. Sorry I am... I'm of the belief that we should try and reduce the use of technology.</p>	<p>C70: Self-perception of being technology-resistant</p>

ID	Interview Statements	Codes
P8	<p>Ok. So it began with simple question and answer, where you know my son wants to know more about something, and because his interest lies in like scientific facts. So he asks questions like...What's the you know? The, the worst natural disaster, what's the biggest volcanic eruption in the world, and I think it progressed from there to other things. I think one of the things that my son enjoys riddles. So he did. This is something I sent to you. I think this is something that my, my wife actually recorded separately. So he asked the AI riddles, and then the AI asked him riddles. And then they, they got to the point of wanting to play with the AI.</p>	<p>C4: GenAI for educational requests C27: GenAI for personal interaction C84: GenAI for recreational use</p>
P8	<p>So in that sense that they were, they were really having like they tried to do a 21 questions thing. where? Questions? Where? I had to ask questions. Guess what is it? What is [C8's child's name] supposed to be right? Yeah. It turns out that yeah, it's really bad at it. So yeah, I couldn't guess at all. And and [C8's spouse] also wanted to see whether the AI could become like a, like a friend, like a playmate for my son. And so she approached it from that, you know, from, from the idea that if I don't have a friend, so I need someone to, to talk to. Can I talk to the AI, and can I have like intelligible answers? Can I have a conversation.</p>	<p>C27: GenAI for personal interaction C37: Limitations of GenAI's abilities in interaction C27: GenAI for personal interaction C27: GenAI for personal interaction C27: GenAI for personal interaction</p>

ID	Interview Statements	Codes
P8	<p>And what she found out was that it wasn't the best lah. Honestly. So it was. There were some gaps in what the AI could do, and basically treating it like another person is... I think it's beyond what you can do. So... but I think facts, factually getting answers back was good, I think, though the other thing that I wanted to comment on was that the AI was not very good in catching some of the words that my son would say, and sometimes they transliterate, or they transcribe completely the, the wrong word. And, but the good thing I think he does manage to catch what he's trying to say, and it does give intelligible answers.</p>	<p>C37: Limitations of GenAI's abilities in interaction C37: Limitations of GenAI's abilities in interaction C37: Limitations of GenAI's abilities in interaction C65: Perception of GenAI output as having high quality C39: Perception of GenAI output as having poor quality C65: Perception of GenAI output as having high quality</p>
P8	<p>So that's also one of the good and bad things you want to comment on the UI. I feel that it's not, It's like you have to listen to the entire thing. So if you ask something complex, and the AI is telling you something very, very long, and you can't stop it, you know, in mid sentence, you have to continue. And there's no option to actually change it to text, which I think that other AI, other AI programs that I've recently used, they actually allow you to, to input both in text and in verbal commands. So there's something that's missing in that.</p>	<p>C40: Limitations in GenAI interface C40: Limitations in GenAI interface C40: Limitations in GenAI interface C41: Perceived usefulness of output in multiple formats</p>

ID	Interview Statements	Codes
P8	<p>I think it could, I can't tell you exactly what happened, but I can tell you like the sense of it is that it could...it could make it seem like it's having a conversation with you. But it's really not so. But it's really not so. You could tell as a human that this the person you're speaking to, or the thing you're speaking to is, is actually this spouting words. But it's not actually saying anything. That's the sense that we get and it's like you cannot go beyond, like, you know, you can't go beyond facts. You cannot go beyond things that it knows. You cannot take what it knows and make it into sentences that seem like you're speaking to a human. So it's still not, yeah. It's still not there yet. Basically.</p>	<p>C27: GenAI for personal interaction C37: Limitations of GenAI's abilities in interaction C37: Limitations of GenAI's abilities in interaction C37: Limitations of GenAI's abilities in interaction C42: Perception that GenAI has not reached its fullest potential</p>
P8	<p>Yeah, my, my son is an only child, and we wanted to see whether we could use AI as a toy like a, like a like a friend that is intelligent enough to give you answers as well as you know. It's like it's almost like a tutor, and AKA slash, friend for you to actually have a proper conversation and, and speak with intelligently. I mean, I mean, intelligent is not a word. Actually, you want a human answer, basically.</p>	<p>C84: GenAI for recreational use C27: GenAI for personal interaction C27: GenAI for personal interaction C27: GenAI for personal interaction</p>
P8	<p>But what you get is a mishmash of things that it knows. And then it, it thinks that what you're trying to ask. But actually, you just like, I say, how are you? You know what's, what's, what's you know, what's going on in the world or whatever. So it's a conversation that doesn't really make sense as a human. Yeah, I can't put a finger on it. But if, if you are a human, you're reading it, or you're listening to it, you realize that it's not a human talking to you.</p>	<p>C37: Limitations of GenAI's abilities in interaction C37: Limitations of GenAI's abilities in interaction C37: Limitations of GenAI's abilities in interaction</p>
P8	<p>Friend , tutor because we, we are sort of talking about roles right? And the roles are very human. You need to...But other than these 2. I don't think there is that so? Mostly it was, it was a question and answer, and it was a conversational sort of use for the AI.</p>	<p>C27: GenAI for personal interaction C27: GenAI for personal interaction</p>

ID	Interview Statements	Codes
P8	<p>No. So once I mentioned this this app called Talk.io, I think. Because I was actually I was doing my IELTS. So I wanted to have a speaking partner for the speaking part of the, of the test. It managed to work to some extent, uses OpenAI. And it was ok lah. It's just that, you know. It gave good answers. It gave good feedback on what I was saying and how I was structuring my sentences and stuff like that.</p>	<p>C27: GenAI for personal interaction C65: Perception of GenAI output as having high quality C65: Perception of GenAI output as having high quality</p>
P8	<p>But it couldn't beat the actual person, yeah, to speak with yeah. Yeah, so and there were, there were gaps, there were, there were, there were. There was some very noticeable pauses, of course, because it's still early, right? And then so you have to wait. So you say something, and you have to wait for them to think, digest what you say, and then come back with something, so that really broke the rhythm. I don't know whether this is part of your scope, because you know, this is not with my child. This is just myself. Yeah.</p>	<p>C37: Limitations of GenAI's abilities in interaction C39: Perception of GenAI output as having poor quality C18: Perception of GenAI immaturity C37: Limitations of GenAI's abilities in interaction</p>
P8	<p>I think at this point it would be very useful as a sort of answer finder and I probably would want to explore creative uses for it, like, for example, could you help me create a song, you know? Could you help me, you know, write a poem? So that's something that I would like to explore, which I think I have done before, and not bad, not bad. But it's something that that my son has not tried. So maybe some using it creatively in terms of yeah, artistic output.</p>	<p>C23: GenAI as a research tool C44: GenAI as artistic generator C29: Optimism of future utility of GenAI C44: GenAI as artistic generator</p>

ID	Interview Statements	Codes
P8	<p>I, I think that any technology that contains information needs to be properly managed, and there has to be gatekeepers to it. I think EdnoAI, I have this sensing that it is safe for children, and I think that there is, there is an age, you know you put, you put, you, you input an age in the beginning and my assumption, I've not tested assumption. But my assumption is that there is an in-built algorithm or something that prevents certain things from coming out like, if you want to say something naughty, it's not gonna, it's not going to respond. In fact, like, you know, OpenAI. If you were to ask them something.</p>	<p>C10: Concerns about stakeholder regulation of GenAI use C10: Concerns about stakeholder regulation of GenAI use C45: Perception of GenAI as being safe for children C45: Perception of GenAI as being safe for children</p>
P8	<p>No, no good, you know. They will not actually reply. This, you know, so it's, it's if that is, that could be that could be transported over to any AI that they use in school. Plus, there must be a guidance from the teacher. It cannot be self discovery at the age of my son who is 8. Maybe it's a bit too young for self-discovery. But perhaps with the teacher's guidance they should be able to use it effectively.</p>	<p>C22: Advocating for supervised use of GenAI in learning C21: Concerns about unsupervised GenAI use in learning C21: Concerns about unsupervised GenAI use in learning C22: Advocating for supervised use of GenAI in learning</p>
P8	<p>My, to my knowledge, no, and knowing my wife, who is, who does the Edtech in the school, and she's the first time user of EdnoAI, and I think, yeah, I think they're, they're not using it in any meaningful way, in a large, meaningful way. Yeah.</p>	<p>C93: Child is not using GenAI for learning in school</p>
P8	<p>Yes, regardless of which AI it is that I do not think that the students are using it. Maybe the teachers are, when the students are not.</p>	<p>C93: Child is not using GenAI for learning in school C96: Educators have leeway to use GenAI tools for teaching</p>

ID	Interview Statements	Codes
P8	<p>I would say that I'm not overly curious, because, as a professional myself, I do use AI for my work to generate like texts and to generate, write ups and stuff like that. So I do use it. And I'm sure the teachers are using the same way. But if they're using it in a way that could be useful to me. Yes, I would like to know more. but if it's for their own use as to generate materials for teaching. I think that's fine, and I do not. I don't know. I wouldn't be... how to say....I wouldn't need to know too much into it if they, if they, if they want to share with us, that'd be great as well. But if they were going to use it with our kids. Then I want to know more. Yeah.</p>	<p>C88: Caregiver identifies as a GenAI user C96: Educators have leeway to use GenAI tools for teaching C52: Expressing interest to learn about GenAI C67: Indifference regarding how schools can partner caregivers in using GenAI for learning C52: Expressing interest to learn about GenAI</p>
P8	<p>Well, if they are using it in some way that I have not figured out, then, professionally, I would like to learn from that teacher who's using it, and then also be able to integrate into my own work</p>	<p>C52: Expressing interest to learn about GenAI C28: Expressing interest to use GenAI in own work</p>
P8	<p>I think, because of the, the fact that it's a little bit of a bespoke that it answers questions without having to, you know, to, too much research. I think, is good, so does the child has ready access to answers. And especially a curious child wants to know more, can ask and query and get those answers immediately.</p>	<p>C24: Perception of GenAI matching child's learning needs C4: GenAI for educational requests C4: GenAI for educational requests C62: Perception of GenAI as fast</p>

ID	Interview Statements	Codes
P8	<p>Of course I would, I would caution, because, like any source of information. There's always something that is deciding what information is being fed. And I do not know, like, for example, if my son were to ask, what is the biggest earthquake in the world. And what is the matrix that this AI actually decided, Hey, this is the biggest one.</p>	<p>C55: Concerns about ethical use of GenAI C13: Not aware about mechanism of GenAI</p>
P8	<p>But they don't tell you why, this is the biggest one, and then, you know you take it. Oh, this is the truth, and then you go somewhere, and then some exposure. Is this other one because of certain reasons, you know. So I think that's something that that is not transparent to parents. And I wouldn't be able to know.</p>	<p>C13: Not aware about mechanism of GenAI C55: Concerns about ethical use of GenAI</p>
P8	<p>I wouldn't be able to control or know what is the basis of those arguments, but for the first cut, I think for general knowledge, for getting to know something at a basics level. I think that's fine, but get to know more. I think they have to do more research, and not only rely on the AI, but on their own, you know, research, on their own savvy to figure it out? Yeah.</p>	<p>C13: Not aware about mechanism of GenAI C55: Concerns about ethical use of GenAI C9: Concerns about excessive dependence on GenAI</p>
P8	<p>I'm not sure the school is able to do that. Maybe they can teach the children prompts. Or they, they inbuilt prompts into it, so that into the way that they ask questions right? So that the, the AI will be able to expand the search and then give them exactly what they want to see. So, for example, maybe they could ask the earthquake thing. Right? Oh, okay, okay. So okay, in the world. Could you tell me what the experts are saying? Or maybe what are the why are the 3 or 4 leading experts say, are the biggest? And why the matrix that they use. And then, you know, then, when they come out, they actually have the answers to why, these are the largest and not just give you the answer, which is the largest.</p>	<p>C17: Concern regarding school readiness for GenAI adoption C54: Belief that schools have the role of educating learners in GenAI use C54: Belief that schools have the role of educating learners in GenAI use C89: Beliefs about learning processes</p>

ID	Interview Statements	Codes
P8	<p>If I can request from the school, if I can request for MOE to create their own AI. Maybe, maybe...but I don't know if an AI could be created specifically for children, Singaporean children, with access to parents to actually see at the back end. I don't know I don't know... more control, and more transparency. Yeah, that's what I would request. More control and [inaudible], more transparency. Being able to know what went into the thought process of AI to come out with the answer.</p>	<p>C87: Suggestion for a bespoke GenAI tool for Singapore schools C87: Suggestion for a bespoke GenAI tool for Singapore schools C22: Advocating for supervised use of GenAI in learning C55: Concerns about ethical use of GenAI C52: Expressing interest to learn about GenAI</p>
P8	<p>I guess if it was researched enough, if we, I think, I knew there was a team of teachers in, in, in MOE somewhere for sitting down and experimenting with one AI, EdnoAI or even like, like Copilot. And then they say, Okay, we have checked. And we have asked that this, this thing is the best, and it fits all the requirements, and we should adopt it as our official AI, and okay, then I guess, I guess I can, I can live with that. But if that, if it's just like Oh, I'm just going to pluck this from a shelf. And okay, I'm just going to give it to the child, then maybe not lah.</p>	<p>C87: Suggestion for a bespoke GenAI tool for Singapore schools C87: Suggestion for a bespoke GenAI tool for Singapore schools</p>
P8	<p>If they were to train my children on how to use the AI. I will also like to have the same training. Cool. So my understanding might be different from even my professional understanding might be different from how best to use AI for children and knowing schools are supposed to be the specialists in, in, in pedagogy and guiding children. And if they have, like, okay, so, parents, this is the way that you should use it with your children. You should help them with this. You should, you know, give them, you know, maybe, maybe even a course in it for parents like a, a, like a short briefing, for... by the teachers.</p>	<p>C52: Expressing interest to learn about GenAI C92: Acknowledging autonomy and expertise of educators C30: Advocating how schools can partner caregivers in using GenAI for learning</p>

ID	Interview Statements	Codes
P8	And then the parents, and then you can give, like examples of what they can use it for, then that would be good. Yeah, that would be useful. Okay, so training, yeah, training and training for, for parents as well.	C30: Advocating how schools can partner caregivers in using GenAI for learning C30: Advocating how schools can partner caregivers in using GenAI for learning

Appendix H - Codes Sub-Themes and Themes

Code	Sub-theme	Theme
C46: Experience of children with GenAI tools	S1: Child-GenAI interaction dynamics	T1: GenAI integration in learning
C7: Enjoyment of GenAI usage by child		
C8: Personification of GenAI by child		
C38: Associating GenAI as a physical entity by child		
C82: Child preferences for prompts		
C32: Child exercising learning autonomy		
C14: GenAI as a learning catalyst	S10: GenAI used for child's academic development	
C4: GenAI for educational requests		
C23: GenAI as a research tool		
C83: GenAI as homework helper		
C75: GenAI for instructional or procedural requests		
C100: GenAI as summary tool		
C101: GenAI to simplify content	S11: GenAI used for child's creative expression	
C44: GenAI as artistic generator		
C90: GenAI for creative thinking or storytelling		
C107: GenAI to express imaginative thinking		
C108: GenAI for creative task requests	S12: GenAI used for child's personal and social development	
C31: GenAI as a self-management tool		
C109: GenAI as behavioural guidance		
C72: GenAI for opinion elicitation		
C104: GenAI for emotional sharing		
C27: GenAI for personal interaction		
C84: GenAI for recreational use	S14: Positive effects of GenAI in academic contexts	
C49: Perception of GenAI suitability for academic as compared to non-academic contexts		
C57: GenAI increasing educator efficiency		
C58: GenAI increasing educator welfare		
C59: GenAI enhancing learning content quality		
C60: GenAI as an early advantage for young learners		
C61: GenAI as part of skillset for young learners		

Code	Sub-theme	Theme
C1: Caregiver empowerment of child for learning	S2: Caregiver influence on child's learning	T2: Stakeholder perspectives and roles
C3: Caregiver shaping child's learning experience		
C25: Caregiver perception of child's learning behaviours		
C68: Caregiver prioritising learning outcomes over processes		
C81: Caregiver perception of expectations of child in contemporary learning		
C89: Caregiver beliefs about learning processes		
C112: Concern about expected level of caregiver involvement in homework		
C26: Acknowledgment of own limitations in guiding child's learning		
C69: Expectation of educators being qualified	S3: Instructional expertise of educators	
C92: Acknowledgment of autonomy and expertise of educators		
C96: Educators have leeway to use GenAI tools for teaching		
C98: Teaching of GenAI prompts by educator		
C102: Belief in compromise when using GenAI for teaching		
C103: Advocacy for rethinking task design in response to GenAI		
C64: GenAI as a learning design tool	S15: Caregivers' attitudes and beliefs regarding technology	
C56: Comparison of GenAI to past technologies		
C48: Belief that technology is not physically durable		
C70: Self-perception of being technology-resistant		
C99: Personification of GenAI by caregiver	S16: Educational investment and expected outcomes	
C76: Expenditure for child's learning		
C63: Perception of minimum acceptable educational standards		
C71: Preparation of learning materials	S18: Stakeholder involvement and collaboration	
C85: Nature of child's schoolwork		
C16: Caregiver progressive views on technology for learning		
C19: Concern regarding how schools can partner caregivers in using GenAI for learning		
C30: Advocating how schools can partner caregivers in using GenAI for learning		
C54: Belief that schools have the role of educating learners in GenAI use		
C74: Acknowledgement of other stakeholders regarding GenAI for learning		
C111: Suggestion on how learning data can be used to help caregivers decide how to help their children		
C114: Concern on lack of communication with parents regarding pedagogical-technological practices		
C113: Concern about perceived lack of educator feedback on child's work		
C67: Indifference regarding how schools can partner caregivers in using GenAI for learning		

Code	Sub-theme	Theme
C18: Perception of GenAI immaturity	S8: Negative perceptions of GenAI performance	T3: GenAI performance
C37: Limitations of GenAI's abilities in interaction		
C39: Perception of GenAI output as having poor quality		
C86: Apprehension about GenAI's perceived efficiency		
C40: Limitations in GenAI interface	S9: GenAI appropriateness concerns	
C11: Concerns about GenAI appropriateness for age group		
C36: Concerns about excessive volume of GenAI response output		
C66: Concerns about GenAI output appropriateness for local context	S13: Functional efficacy of GenAI	
C5: GenAI's information-processing abilities		
C33: GenAI ease of use		
C34: GenAI as an interactive user interface		
C41: Perceived usefulness of output in multiple formats		
C42: Perception of engagement levels of GenAI response formats		
C65: Perception of GenAI output as having high quality		
C45: Perception of GenAI as being safe for children		
C43: Perception that GenAI has not reached its fullest potential		
C62: Perception of GenAI as fast		

Code	Sub-theme	Theme
C2: Caregiver's negative perception of learning as diverse and having variety	S4: Skepticism of GenAI in child's learning	T4: Uncertainties in ethics, quality and practicalities
C20: GenAI educational risks and safeguarding		
C50: Caregiver not aware about how children are using GenAI for learning in school		
C9: Concerns about excessive dependence on GenAI		
C110: Beliefs regarding some educators not using GenAI		
C93: Child is not using GenAI for learning in school (should this be somewhere else?)		
C13: Not aware about mechanism of GenAI		
C10: Concerns about stakeholder regulation of GenAI use	S7: Ethical and practical considerations for GenAI in learning	
C17: Concern regarding school readiness for GenAI adoption		
C21: Concerns about unsupervised GenAI use in learning		
C22: Advocating for supervised use of GenAI in learning		
C47: Concerns about safe use of GenAI by children		
C55: Concerns about ethical use of GenAI		
C73: Concern about educator skills and knowledge		
C77: GenAI reducing costs of learning resources		
C79: Concern about children not being able to outperform GenAI in terms of providing content	S17: Conflation of AI with GenAI	
C94: Perception that child is too young to use GenAI for learning in school		
C85: Nature of child's schoolwork		
C35: AI as a self-management tool		
C78: Child's prior experience with AI tools		
C80: AI for educational requests		
C95: Perception that most children have AI tools at home		
C97: AI tools for language learning at home		
C105: AI as automarking tool		
C106: AI increasing educator efficiency		

Code	Sub-theme	Theme
C6: Caregiver's utility perception of GenAI	S5: Advocacy for GenAI in learning	T5: Advocacy and understanding of GenAI
C12: Caregiver affirmation about GenAI appropriateness for a age group		
C15: Caregiver's positive perception of GenAI's role in learning		
C24: Caregiver's perception of GenAI matching child's learning needs		
C29: Caregiver's optimism of future utility of GenAI		
C51: Perceived prevalence of GenAI in learning		
C53: Caregiver's perception of a compelling need for learners to use GenAI		
C87: Caregiver's suggestion for a bespoke GenAI tool for Singapore schools		
C91: Caregiver's willingness to compromise in spite of negative perceptions of GenAI		
C28: Caregiver expressing interest to use GenAI in own work		
C52: Caregiver expressing interest to learn about GenAI		
C88: Caregiver identifies as a GenAI user		

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PERSPECTIVES OF GENERATIVE AI CHATBOT USAGE AMONG CAREGIVERS OF YOUNG CHILDREN AGED 3-7 IN SINGAPORE

supervised by Emanuele Bardone.

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Muhammad Imran bin Hassan

31/05/2024

Appendix 2. Form for the graduation thesis (~~bachelor's thesis~~ / master's thesis) project

<p>Student (given name, surname, programme, year of entry, email address)</p> <p>Name: Muhammad Imran bin Hassan Programme: Master of Arts in Educational Technology Year of entry: 2023 Email: muhammad.imran.bin.hassan@ut.ee</p>
<p>Preliminary title of the thesis and volume in ECTS credits (for a master's thesis, the field of research according to CERCS)</p> <p>Title: PERSPECTIVES OF GENERATIVE AI CHATBOT USAGE AMONG CAREGIVERS OF YOUNG CHILDREN AGED 3-7 IN SINGAPORE ECTS credits: 15</p>
<p>Supervisor(s) (given name, surname, degree, position, contact information)</p> <p>Name: Emanuele Bardone</p>
<p>Justification of the choice of topic and the research problem (backed by research and correctly referenced)</p> <p>In school-home partnerships, caregivers play a significant role by collaborating with educators, ensuring a shared partnership of the learner's learning experience (Swick, 1992, as cited in Bevans et al., 2001). Schools must acknowledge and incorporate the perspectives of caregivers in such partnerships. Not only does this enrich the learning environment, but it also promotes a more engaged partnership (Davies, 1993). Furthermore, when caregivers and educators exchange information about learners and genuinely consider each other's insights, they share the creation of knowledge that benefits the learning process for the learner (Lynch, 2021). This exchange is particularly pertinent when considering the integration of GenAI chatbots in learning. Therefore, seeking and heeding caregiver input concerning the use of GenAI chatbots for learning is critical.</p>
<p>Objective of the thesis (one sentence)</p> <p>This study aims to explore and describe the perspectives of caregivers of young children aged 3-7 in Singapore, regarding GenAI chatbots in learning.</p>
<p>Hypothesis/hypotheses and/or research questions of the thesis</p> <p>RQ1: How do caregivers in Singapore use GenAI chatbots in joint learning activities alongside their young children aged 3-7? RQ2: What are caregivers' perspectives on the use of GenAI chatbots for young children's learning in Singapore?</p>
<p>Research methods: sample, data collection, data analysis</p> <p>Sample: 9 caregivers who meet the following criteria: (1) above 18 years old; (2) residing in Singapore; and (3) had in their care, at least one child aged between 3 and 7</p> <p>Data collection:</p>

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of the University of Tartu
27.11.2023

(1) Screenshots of GenAI interaction logs (2) Semi-structured interviews Data analysis: Qualitative thematic analysis
Thesis timeline (estimated allocation of time by months) 5 months
Sources used for compiling the project (formatted according to the graduation thesis requirements) Refer to thesis pages 21-25
Signature of the student: (signed digitally) <i>imfan</i>
Signature of the supervisor: (signed digitally)

